



UHERO FORECAST PROJECT

COUNTY FORECAST:  
SPONSORS EDITION

## COUNTIES SHARE POSITIVE OUTLOOK, BUT FACE INDIVIDUAL CHALLENGES

MAY 20, 2016





# UHERO

THE ECONOMIC RESEARCH ORGANIZATION  
AT THE UNIVERSITY OF HAWAII

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## UHERO COUNTY FORECAST

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## EXECUTIVE SUMMARY

Hawaii's four counties are moving steadily forward, accommodating new visitors, restoring lost jobs, and growing household incomes. Prospects remain good for the next few years, supported by health in the US economy, local labor markets, and construction. Growth rates will begin to trend lower, as each county converges toward its trend path and as construction moves to, and then beyond, the next cyclical peak.

- Additional growth is expected for the visitor industry in all counties, if more restrained than in 2015. US economic strength will support domestic travel, which will particularly benefit the Neighbor Islands. Conditions in international markets are more challenging; Chinese slowing, a struggling Japanese economy, and weak currencies will be a drag on international arrivals and spending. Modest accommodations growth will permit only incremental growth in total visitors in coming years.
- Last year was a breakout year for construction on the Neighbor Islands and another strong one for Oahu. Honolulu is much further along in the cycle, and payroll job counts are now above the previous peak, driven by Kakaako condos, commercial building, and rail. The Neighbor Islands are seeing resort development and the beginning of a residential pickup, but the extent of this building upswing will be more limited than in the past. High single-digit or low double-digit construction job growth will be seen on all Islands this year, before growth rates slow as we approach the cyclical peak.
- Outside of construction, the areas of strongest job growth in the near term will be accommodation and food services on the Neighbor Islands and transportation and utilities on Oahu. All counties will see some backing off of growth in tourism-related sectors over the next several years. Despite the woes of the state hospital system, private health care will be among the strongest industries over the medium term, growing to meet the needs of an expanding and aging population. Our large "other services" category, which includes everything from entertainment to professional services, will grow faster than the overall job base in most counties. Government budget pressure will limit the role of the public sector in job creation.
- After relatively healthy growth this year, increments to employment will begin to taper off as the economy converges to a long-run path consistent with labor force growth. Buoyed by lower unemployment and restrained inflation, real personal income grew in the roughly 3.5-4.0% range last year across the counties. By 2018, it will slow to about 1% on Oahu and roughly 2.5% on the Neighbor Islands.
- Specific challenges face each of Hawaii's four counties. On Oahu, it is the financial problems of rail rapid transit; on Maui, the closure of HC&S. Kauai continues to struggle with inadequate infrastructure to support tourism and local communities. On the Big Island, the vigorous opposition to Mauna Kea telescopes raises concerns about the future of the high tech economy. These challenges will play out against what is a generally positive macroeconomic outlook for the next several years.

COUNTY MAJOR ECONOMIC INDICATORS  
YEAR-OVER-YEAR PERCENT CHANGE

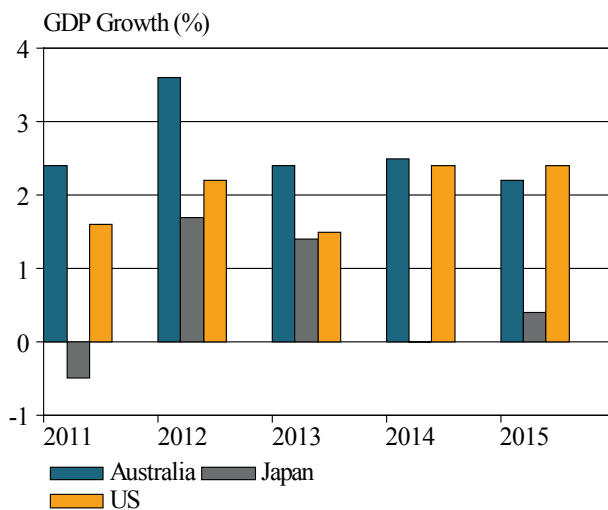
	2013	2014	2015	2016	2017	2018
HONOLULU						
Visitor Arrivals	2.9	2.6	2.8	1.5	0.7	0.5
U.S. Visitor Arrivals	1.5	2.7	3.3	2.6	0.8	0.1
Japan Visitor Arrivals	3.4	0.8	-1.0	-1.4	0.8	0.6
Other Visitor Arrivals	5.2	4.9	6.5	2.4	0.6	0.9
Payroll Jobs	1.9	1.2	1.3	1.5	0.8	0.5
Real Personal Income	-1.3	2.9	3.5	1.8	1.6	1.1
HAWAII						
Visitor Arrivals	0.1	1.0	3.8	3.1	2.5	1.0
U.S. Visitor Arrivals	-0.8	2.7	5.7	4.3	1.6	0.5
Japan Visitor Arrivals	-1.9	-14.4	-16.8	-0.2	4.2	2.6
Other Visitor Arrivals	4.8	6.0	9.1	0.7	4.3	1.8
Payroll Jobs	2.6	1.4	2.2	2.6	1.4	1.0
Real Personal Income	0.6	3.9	3.9	3.1	2.9	2.5
MAUI						
Visitor Arrivals	2.1	2.0	4.8	1.9	1.3	1.5
U.S. Visitor Arrivals	0.4	3.1	6.1	2.0	1.1	1.5
Japan Visitor Arrivals	15.9	-24.8	0.9	-1.3	-3.0	-2.2
Other Visitor Arrivals	5.8	2.3	0.6	1.9	2.5	2.1
Payroll Jobs	2.7	2.2	2.4	2.0	1.4	1.4
Real Personal Income	-1.4	4.2	4.0	2.5	2.2	2.7
KAUAI						
Visitor Arrivals	2.7	0.3	4.3	2.1	2.0	2.0
U.S. Visitor Arrivals	2.0	0.2	3.5	2.2	1.8	2.0
Japan Visitor Arrivals	5.5	-19.0	5.8	-0.4	2.8	7.1
Other Visitor Arrivals	6.4	3.8	8.3	1.9	2.5	1.5
Payroll Jobs	3.1	1.6	1.4	2.1	1.2	1.2
Real Personal Income	0.9	4.5	3.4	2.7	2.6	2.5

Figures for 2015 county income are UHERO estimates. Figures for 2016 - 2018 are forecasts.

## OVERVIEW

We have been reporting on the steady gains that have been made in the overall Hawaii economy. In most respects these are shared across all counties. They reflect common factors that have driven Hawaii's emergence from the Great Recession and the subsequent expansion. Differences remain that reflect idiosyncratic features of local economies, their relative exposures to various visitor markets, and their stages in the current construction upswing. But the path forward for each county will be shaped in important ways by prospects for these common factors, including the state of the global economy, the health of labor markets, and the ebb and flow of the state's building cycle.

Conditions outside of Hawaii remain generally favorable, but with important risks. The US is outperforming much of the developed world, even if the pace of growth has been less robust than in most past expansions. While we are feeling the adverse effects on trade of a strong dollar and tepid global demand, American consumers remain confident and are continuing to spend. This will support Hawaii's visitor industry generally, and the Neighbor Islands—which are heavily dependent on US visitors—in particular.



THE JAPANESE ECONOMY CONTINUED TO STRUGGLE LAST YEAR.

Economic conditions abroad are more challenging. The currencies of many countries have fallen in value considerably over the past three years. The purchasing power of the Japanese yen, Canadian dollar, and Australian dollar are 25-30% below 2012 levels, undercutting foreign spending power in the Islands. While we have seen some partial recovery in recent weeks, low currency values will continue to be a challenge for tourism, particularly on Oahu.

International travel is also feeling the weight of a struggling Japanese economy and weakness in China, which reduces growth prospects across Asia. And prospects for a global rebound are poor. The limited effectiveness of monetary stimulus by Europe and Japan and the adverse impact of low commodity prices on developing countries recently led the IMF to downgrade its forecast for the world economy.

So far, travel to Hawaii has performed well despite these headwinds. In fact, Oahu, which is most heavily dependent on international visitors, is operating at historically high hotel occupancy rates. The Neighbor Islands have a bit more capacity to spare, but even here accommodations use is not far below levels seen at past industry peaks. It was therefore a bit of a surprise how big last year's arrivals gains were, ranging from nearly 3% on Oahu to almost 5% on Maui. Going forward, one unknown risk is the response by travelers to concerns about mosquito-borne illness. It is reassuring that Hawaii County's dengue outbreak appears to be under control, but the global emergence of Zika is worrisome. Even if Hawaii remains free of the virus, it is possible that travelers will become concerned about risks in all tropical areas.

Our projections of only modest additions to county room stocks suggest that the scope for further visitor growth will be limited. The wild card here is transient vacation rentals. TVRs have become a more prominent component of the visitor plant with the increasing popularity of home sharing services like Airbnb and VRBO. However, the relative size of the TVR sector is not known with certainty. A 2014 study by SMS

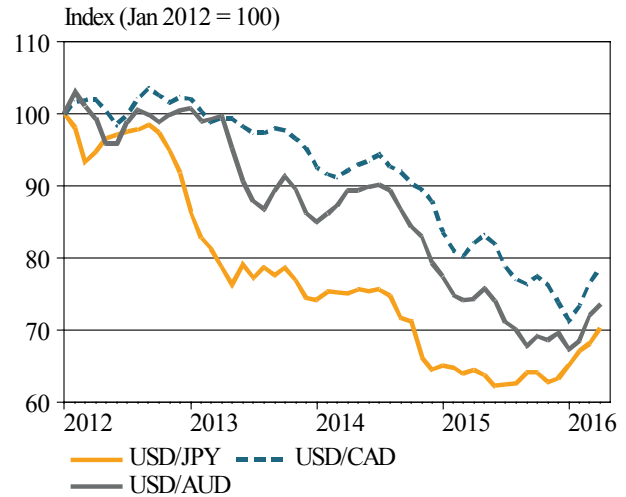


research for the Hawaii Tourism Authority found that if all identified TVR units were rented at one time, they would account for a quarter of the visitor industry. But a recent study for Airbnb found that the vast majority of Airbnb hosts rent out their properties on an infrequent basis, so that units advertised on the site make up a relatively small portion of the effective visitor plant. In any case, this is clearly a dynamic sector, and how it evolves will have important implications for industry capacity going forward. Beyond the number of rooms, some islands face growing infrastructure challenges to further tourism growth.

Eight years of expansion have largely restored labor market health. Job growth has been steady, if not spectacular, and this has brought unemployment rates in the counties to within a percentage point or so of pre-recession levels. Anecdotally, availability of qualified workers is becoming a challenge statewide, and across all skill levels. To be sure, there remain elements of labor market performance that are sub-par, including a larger than normal number of potential workers who are not actively seeking work and others who may have suffered a decline in skills or employability because of the long bouts of unemployment they experienced during the deep and long recession.

It took some time to begin to see significant gains in income. That began to change in 2014, when there was an upward bump in income growth on all islands. Over the past two years, inflation-adjusted personal income has risen six-and-a-half percent on Oahu and about eight percent on the Neighbor Islands, according to our estimates. While the biggest percentage gains are now behind us, healthy labor market conditions will support moderate income growth for the next several years.

The construction cycle is now in upswing in all counties. The Neighbor Islands were later to the party than Oahu, where job growth began in 2010 and had exceeded its previous peak by the fourth quarter of last year. A condo

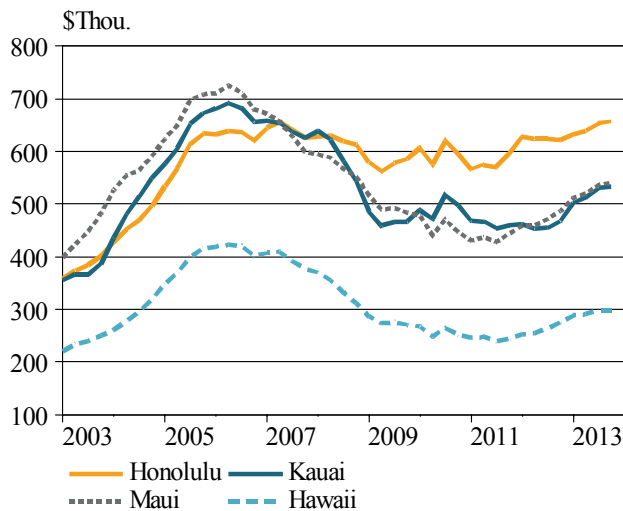


WEAK CURRENCIES POSE A CHALLENGE TO TOURISM, PARTICULARLY ON OAHU.

building boom in Kakaako, strong commercial activity, and the Honolulu rail rapid transit have driven the industry on Oahu. The legacy of the 2000s housing boom prevented an early pickup in residential building on the Neighbor Islands, and the magnitude of the current expansion will fall short of that bubbly period. All counties can expect another year of robust job gains before growth rates fall back as we approach the cyclical peak.

Home prices have recovered relatively slowly in this expansion, and, while they are now above 2007 levels on Oahu, they remain significantly below those levels on Maui and the Big Island and a bit below the previous peak on Kauai. Nevertheless, affordability is always a concern in Hawaii, and it will further erode as home prices and interest rates edge further upward over the next several years. The limited building now underway has raised concerns in some circles that it will be insufficient to meet the anticipated growth in household formation. Very visible homelessness brings this readily to people's minds.

There are issues specific to particular counties that will affect their economic paths. On Oahu, it is the financial challenges for rail; on Maui, the closure of HC&S. Kauai



THE RECOVERY OF HOME PRICES HAS BEEN SLOW.

continues to struggle with inadequate roads and now increasing pressure from visitors at popular parks. The Big Island has seen vigorous opposition to Mauna Kea telescopes, which raises concerns about the future of high tech in the county. We will discuss such county-specific challenges and broader differences in growth prospects in the individual county sections, below.

Hawaii's counties have passed through a difficult decade. But for some time they have been moving steadily forward, accommodating new visitors, restoring lost jobs, and now growing household incomes. Prospects are good for continued growth in the years to come. Rates of expansion will trend lower, now that each county is converging to its long-run trend path and as construction moves to, and then beyond, its next cyclical peak.

## HONOLULU COUNTY

Honolulu County can expect several more years of growth in jobs and income. Ongoing expansion on the US mainland and better global conditions should maintain a healthy tourism sector, although capacity use is near its limits. A maturing construction cycle and tightening labor

markets will also restrain the pace of growth compared with recent years.

## TOURISM

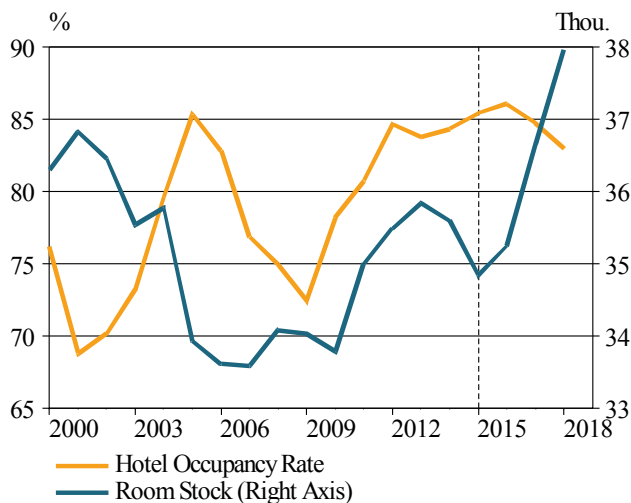
Capacity constraints and the strong US dollar will weigh on the Oahu visitor industry for the next several years. Over the past half-decade, the county has seen robust growth in visitor days, pushing hotel occupancy rates and real room rates up above historical highs. At the same time, the purchasing power of many international visitors has declined substantially as their currencies have fallen in value relative to the US dollar. The combined effect of limited room availability and rising costs will limit further gains in visitor activity on Oahu.

Oahu hotels have effectively been operating at full capacity for several years now. The hotel occupancy rate has been above 80% since 2011, an unprecedented period of very high capacity utilization. (Data courtesy of Hospitality Advisors LLC.) Last year's closure for renovations of the Ohana Waikiki West, Hokele Suites Waikiki, and the Ihilani Resort reduced available capacity by an additional 2%, pushing the hotel occupancy rate up above 85%.

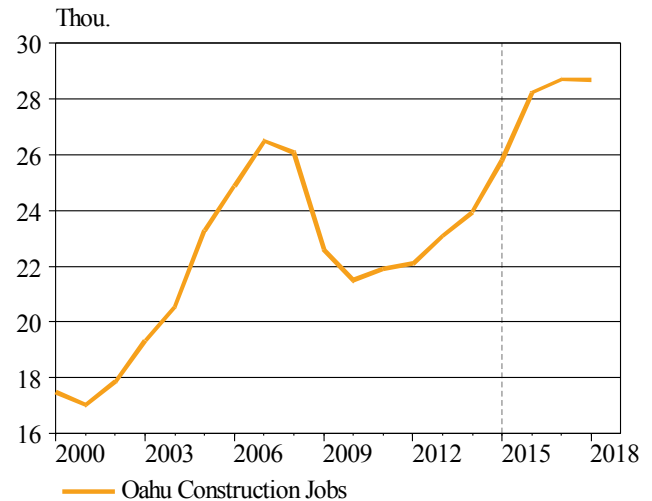
The Oahu room stock will recover in 2016 as properties closed for renovations reopen and new resort developments are completed. The first tower at the Ritz-Carlton Residence Waikiki Beach will open this year. A second Ritz-Carlton tower under construction on the same site was slated to open by mid-2018, but a recent challenge to the permitting process could delay this. The Hilton Hawaiian Village Grand Islander Tower, a timeshare project in Waikiki, is scheduled for completion in 2017, and there are plans for a second tower to be built subsequently. Looking further out there are several projects working their way through the planning process, including the expansion of the Turtle Bay Resort on the North Shore, the development of a new *condotel* at the current site of King's Village in Waikiki, and

a pair of new luxury hotels to be developed at Ko Olina by a Chinese company. We estimate that by the end of the decade the Oahu room stock will be roughly 9% higher than 2014 levels. The increased room stock will release some pressure on occupancy rates, which will ease to the low-80% range by the end of the decade, still high by historical standards. As we noted above, TVRs have become an increasing share of the accommodations inventory, even if it remains unclear precisely how big that share is. It is anticipated that further growth in this segment will play a modest role in alleviating capacity pressure on Oahu.

The air seats outlook suggests little overall change in airline capacity in 2016. After a nearly 5% jump at the start of the year, lift from the US mainland to Honolulu is projected to decline almost 2% in the second quarter. Several domestic air carriers are reducing service to Honolulu: United Airlines from Los Angeles, Delta Airlines from Atlanta, and Alaska Airlines from Seattle and Bellingham. Lift from Japan will see a 5% drop in the second quarter, largely driven by Delta trimming seats from its Fukuoka, Nagoya, and Osaka routes. However other hubs around the Pacific Rim will see substantial gains: the entry of low-cost Korean carrier Jin Air will boost lift from Seoul by almost



OAHA ROOM STOCK WILL RECOVER AND HELP TO RELIEVE OCCUPANCY RATE PRESSURE.



CONSTRUCTION JOBS ON OAHU WILL SURPASS PEAK LEVELS OF THE LAST CYCLE.

30%, while China Eastern Airlines will add 8% more seats on its Shanghai route. Lift from Oceania will see a 6% boost, as Australian carriers Qantas and JetStar increase service from Sydney and Melbourne, respectively. For the year as a whole the seats outlook statewide (no full-year outlook is available for Oahu) points to essentially zero growth in lift.

As we have noted, the appreciating US dollar places further pressure on the Oahu visitor industry. Currency fluctuations affect the visitor industry statewide, but the effect is especially pronounced on Oahu because the county has the largest exposure to international tourists. International tourists account for nearly half of the visitor days on Oahu, compared with 15-25% on the Neighbor Islands. The largest adverse effects of the strong dollar are likely on visitor discretionary spending on shopping, activities, and other non-hotel expenditures.

Despite these factors, this year has gotten off to a relatively strong start, with arrivals up more than 3% through March. Length of stay and per-person spending, however, have continued to fall, resulting in less than 1% growth in nominal visitor spending. For 2016 as a whole, we expect arrivals to grow by about one-and-a-half percent, compared with nearly 3% growth in 2015. We anticipate further slowing



## STATE FORECAST UPDATE:

STATE ECONOMY TRENDING UP,  
GLOBAL CONDITIONS WOBBLY

Despite ongoing worries about the global economy, 2016 is shaping up to be another good year for Hawaii. Weak growth in Europe and Asia—and even weaker currencies—have weighed on international markets, but still the tourism industry has seen healthy growth. The construction industry is surging, in some cases leading to shortages of workers with particular skill sets. Local economic conditions remain favorable for additional improvement in employment and income across the economy.

The visitor industry posted solid gains in the first quarter. Additions to the room stock will deliver some relief from capacity constraints that have pushed occupancy rates up to very high levels on Oahu. After two years of decline, the number of transient accommodation units statewide is set to rise by more than 4,000 units by 2018. Last year's sharp drop in the yen and other foreign currencies, as well as global commodity weakness, will take a bite out of Japanese and Canadian markets this year, but this will be offset by the growing appeal of a Hawaii vacation in other international markets. Together with the contribution of a healthy US market, overall visitor days and visitor spending will grow in the 1%-2% range over the next two years.

According to preliminary data, the construction upswing generated nearly 20% employment growth in the sector in the first quarter. While Oahu was alone in the early stages of the

expansion, the Neighbor Islands saw a big surge last year. Homebuilding activity, which had been largely confined to high-rises in Kakaako, is picking up a bit statewide; on Oahu, the recent court victories for DR Horton and Castle & Cooke have cleared the path for what may eventually be 15,000 homes on the island's leeward side. Construction of the first half of the Honolulu Rail project is progressing. Moving forward with the challenging second ten-mile stretch through downtown Honolulu is proving more difficult because of cost overruns and charges of mismanagement.

Job growth gained strength over the course of the first quarter. For the next two years, job and real income growth will average 1.3% and 1.9%, respectively, tapering off thereafter as the business cycle matures and the construction surge wanes. With energy prices gradually recovering and shelter costs moving higher, inflation will break above 2% by 2017.

While conditions for further expansion in the Islands look good, they are much less promising globally. The US economy experienced lackluster growth in the first quarter, in part due to hesitant consumer spending. The Federal Reserve's decision in April to delay further interest rate hikes for now was based on domestic uncertainty as well as global weakness. Citing an array of concerns, the International Monetary Fund also lowered its projections of global economic growth for this year. As always, what happens outside of Hawaii will have important implications for what happens here at home.

HAWAII ECONOMIC INDICATORS  
YEAR-OVER-YEAR PERCENT CHANGE

	2013	2014	2015	2016	2017	2018
Visitor Arrivals	1.7	2.3	4.3	1.6	1.1	0.8
U.S. Visitor Arrivals	0.7	2.2	5.7	2.0	1.2	0.6
Japan Visitor Arrivals	3.6	-0.4	-0.8	-1.3	1.1	1.2
Other Visitor Arrivals	3.2	5.0	4.7	2.9	0.9	1.2
Non-farm Payrolls	2.0	1.4	1.5	1.7	1.0	0.7
Unemployment Rate (%)	4.9	4.4	3.6	3.0	2.9	3.0
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Real Personal Income	-1.0	3.2	3.6	2.0	1.8	1.5
Real GDP	0.8	1.3	3.9	2.9	2.2	1.5

over the next several years, with arrivals decelerating to a half percent growth by 2018. The strongest markets will be the US and non-Japanese international economies. While capacity constraints and an unfavorable global economic environment will limit growth, barring an outright global recession the industry will continue to operate at historically high levels of activity.

## THE LABOR MARKET

Now fully recovered from the Great Recession, the Oahu labor market will expand at a gradual pace consistent with population growth and relatively stable rates of labor force participation. In the near term, a key driver of job growth will be the ongoing expansion in the construction sector. The contribution of this sector will ease as the construction cycle reaches its peak over the next few years.

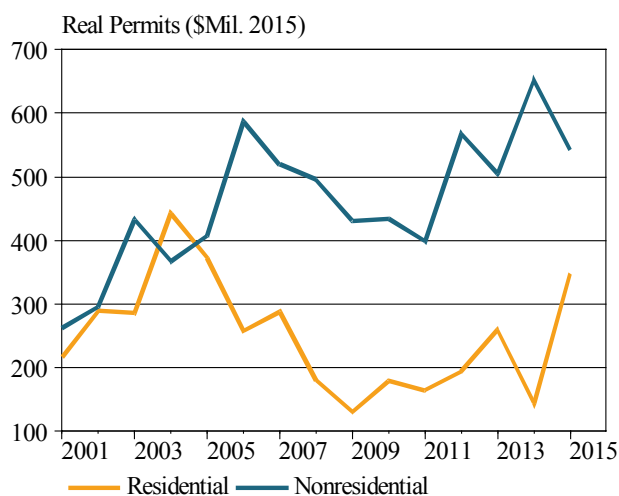
Construction job counts have now broken above levels seen at the peak of the last cycle, and the pace of hiring continues to accelerate. Following a 14% surge in the fourth quarter of 2015, payrolls are up 20% in the year to date. A number of major projects began construction last year, and there are several more slated for construction this year and next. In Kakaako, Keauhou Place, a new high-rise residential

project, broke ground in late 2015; a second tower on the same block dubbed Keauhou Lane is scheduled to start construction in April. In West Oahu, construction began at the Kapolei Lofts, a 499-unit rental project. The Howard Hughes Corporation recently broke ground on Aeo, a 460-unit high-rise in Kakaako.

Both of Oahu's large planned single-family housing developments have now cleared their remaining legal challenges. Hoopili, DR Horton's 11,750-unit master-planned project in West Oahu, cleared its final hurdle before the Hawaii Supreme Court at the end of 2015 and will begin construction in 2016. Koa Ridge, Castle and Cooke's 3,500-unit project to be situated in the area between Waipio and Mililani, received the Supreme Court's green light just weeks ago and will begin construction next year.

While this construction cycle was kick started by the PV boom and a series of major retail renovations in 2012-2013, nonresidential construction activity has now plateaued. Several major non-residential projects broke ground last year, including the new regional shopping center Ka Makana Alii in Kapolei, but at this point as new projects are coming online others are winding down, leading to little net change in non-residential building.

There has been considerable discussion about the potential for the rail project to catalyze development along its route, what is known as transit oriented development (TOD). The City and County have undertaken planning for TOD in key communities, and certainly some development will follow as rail moves forward. In Kakaako, the promise of rail has been cited as one motivation for development in the Ward Village complex and in Kamehameha Schools' Our Kakaako, and access to rail has been touted as a draw for the Hoopili community. Developers appear skittish about any big TOD plans as HART and the City and County struggle to bring rail all the way to Ala Moana and make it operational. In any event, it appears that in most areas TOD



RESIDENTIAL BUILDING ON OAHU IS PICKING UP STEAM.

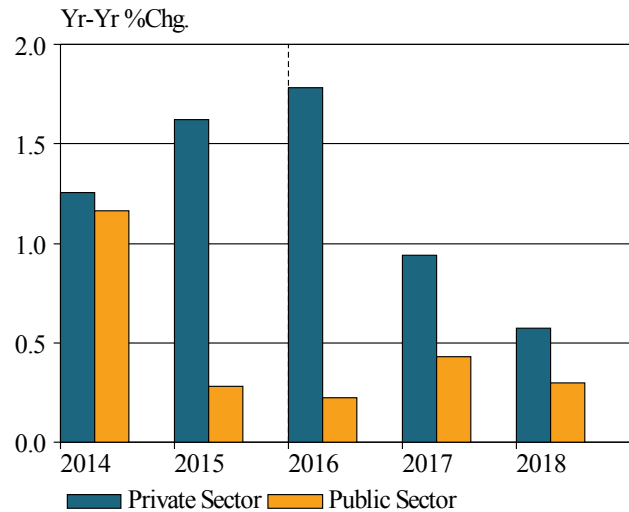
will come slowly, contributing only modestly to construction activity in coming years.

Construction projects in the pipeline will continue to support robust job growth this year—we expect payrolls in the industry to increase 9.5% in 2016. Thereafter, net job gains will slow substantially. The bulge in commercial construction that accompanied the economic recovery will have run its course. While single-family residential building will accelerate, the rapid pace of condo building will ease as the pent-up demand for luxury units is met and as affordability erodes for middle-income buyers. Payrolls will peak in 2017 and decline thereafter.

The healthcare sector continues to be a significant driver of growth as Oahu's population ages and health-related spending makes up a bigger share of household budgets. Last year, payrolls in the sector rose more than 3%, accounting for more than a quarter of all job gains. Consistent moderate growth has continued into this year, with industry payrolls up 3% in the year to date. Over the next three years, payroll growth in the healthcare industry will average 1.7% per year, substantially higher than the overall rate of job growth across all industries.

Weakness in the public sector will continue to weigh on overall employment growth. The downsizing of federal government jobs ended last year, after a net loss of roughly 2,000 jobs since 2012. Federal payrolls were up 1.7% in the fourth quarter of 2015 and are flat for the start of this year. The state and local government sector also saw a rebound in payrolls at the end of 2015, but job counts are down slightly in early 2016. While public employment has stabilized, we expect budgetary pressure at the federal, state, and local levels to limit job growth going forward.

The federal civilian workforce will remain flat. A slight bounce back in non-defense related jobs will be offset by further reductions in civilian workers associated with announced cuts in Army troops stationed in Hawaii. The



BUDGET PRESSURES WILL CONTINUE TO LIMIT PUBLIC SECTOR JOB GROWTH IN HONOLULU.

latest plan calls for an 8% reduction in active duty soldiers stationed at Schofield Barracks by the end of fiscal 2017. This drawdown in active duty soldiers, while not captured by payroll figures, will be associated with cutbacks on the civilian side. The Army has announced that it will need to cut 17,000 civilian workers nationwide, although the details of where those layoffs will occur have yet to be determined.

Overall, the rate of job growth will slow over the next several years. Total nonfarm payrolls will expand by 1.5% in 2016, in line with the pace of growth we saw last year. As the construction upswing abates, total job growth will decelerate, dropping below 1% in 2017 and to 0.5% the following year. The unemployment rate, which stood at 2.9% in February 2016, will average 2.8% for the year as a whole.

## PRICES AND INCOME

Last year falling energy prices kept a lid on inflation, but with that now behind us and with home prices rising, inflation is now poised to pick up. Prices of many goods and services are already on the rise: in the second half of 2015 food prices increased more than 4%, and core inflation (the total excluding food and energy) was up more than 3%.

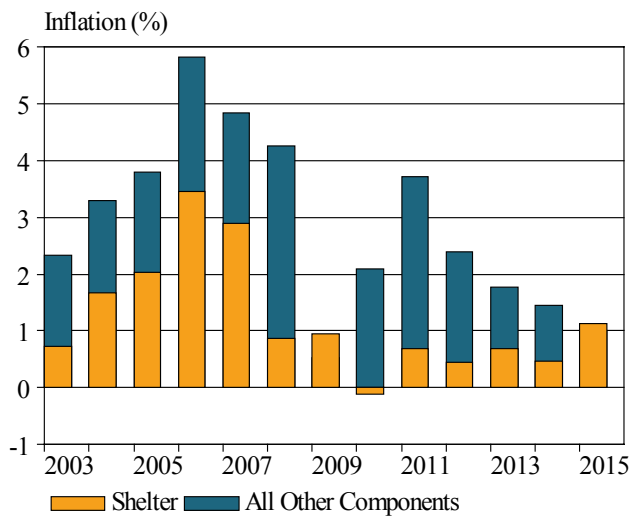
Overall inflation will average 1.5% this year and eventually peak just above 3% in 2018 before subsiding.

Still, this cycle will be characterized by milder price pressures than we saw in the last expansion, when between 2004 and 2008 inflation averaged 4.7%. This time around, consistent with futures market valuations, we expect energy prices to rise only gradually. And, despite 6% appreciation this year, home prices will also rise at a much slower pace than they did during the last housing cycle. New supply from Kakaako condos, Hoopili, and Koa Ridge will keep home price inflation in check.

Stable prices and healthy employment gains have led to a substantial increase in real (inflation-adjusted) income in 2015. Official county income figures are not yet available, but we estimate that real personal income increased 3.5% in 2015, the fastest pace since 2004. Real income growth will decelerate below 2% this year and drop to about 1% by 2018. This reflects slowing job growth as well as a deceleration in the pace of wage gains as the upswing eases.

## ONGOING CHALLENGES

Against this positive backdrop are arrayed several key challenges. Despite the current construction upswing, the

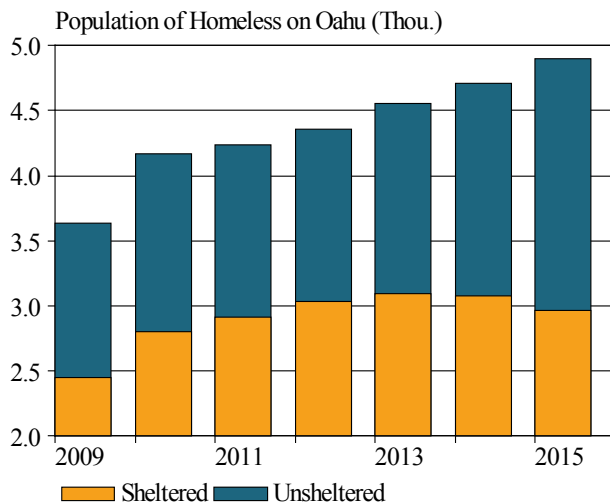


HOUSING COSTS ARE CONTRIBUTING LESS TO INFLATION THAN IN THE LAST CYCLE.

anticipated volume of home building will be insufficient to meet projected need, although the shortfall will likely not be as large as state projections suggest. And certainly the court approvals for Hoopili and Koa Ridge are good news for housing supply.

Rail continues down the track, but with costs that continue to escalate and a start date that has fallen further back. Earlier this year the Honolulu City Council approved a five-year extension of the dedicated half-percent GET surcharge, considered sufficient to cover the cost estimate at that time of \$6.57 billion. However, in recent weeks rail officials have signaled that the latest tax extension may not be sufficient. City and County frustration with the cost overruns has boiled over, prompting HART Board Chair Donald Horner to resign. The first stretch of the rail line, running from East Kapolei to Aloha Stadium, is scheduled to begin operation in late 2018. The full 20-mile line, ending at Ala Moana Center, is now scheduled to open in 2022, roughly two years later than originally planned.

For many, the most unsettling challenge facing Oahu is homelessness. Despite improving economic conditions, the number of homeless people continues to grow rapidly. In January 2015 the City identified 4,900 homeless people on Oahu, a third more than in 2009. Last year the City implemented controversial policies to ban sitting and lying on public sidewalks as well as a process to break down homeless encampments in City parks. The State began its own program to sweep individuals and their property off state land, and Governor Ige has declared homelessness a state of emergency. While the homeless are now much less visible than a year ago, it is unclear whether these programs have been effective in moving people into shelters. Late last year the City opened Hale Mauiola, a transitional housing facility on Sand Island, but the City Council has cut funding for the site from the latest City budget draft. Rising homelessness is a problem nationwide, and Honolulu will likely struggle with it for many years to come.



DESPITE IMPROVING ECONOMIC CONDITIONS, THE NUMBER OF HOMELESS PEOPLE CONTINUES TO GROW.

Despite these challenges, the Honolulu economy continues to perform well, providing job growth that has brought down unemployment and begun to raise personal income. The period of robust recovery-related growth is behind us, but prospects look good for more moderate expansion over the next several years. And we may yet be surprised by stronger than expected growth in the visitor industry, which has continued to expand at a healthy rate despite capacity constraints.

## HAWAII COUNTY

Despite a mixed outlook for international travel, healthy growth in US visitor arrivals will keep Big Island tourism on the rise. A mix of public and private projects will maintain the current construction upswing, and service areas like health care are poised for further growth. As the business cycle matures, employment and income gains will come more slowly. There continue to be significant challenges to diversification away from tourism, highlighted over the past year by the so-far successful opposition to construction of the Thirty Meter Telescope.

## TOURISM

Hawaii County tourism will continue to see healthy conditions for the next several years. This year has gotten off to a rather slow start, with visitor arrivals up a bit more than 1% in the year to date. Visitor days and nominal visitor expenditures have both increased, although weak foreign currencies are weighing on spending by international visitors. This will likely continue to be a challenge, although if the recent pullback in the US dollar continues, international markets could surprise to the upside.

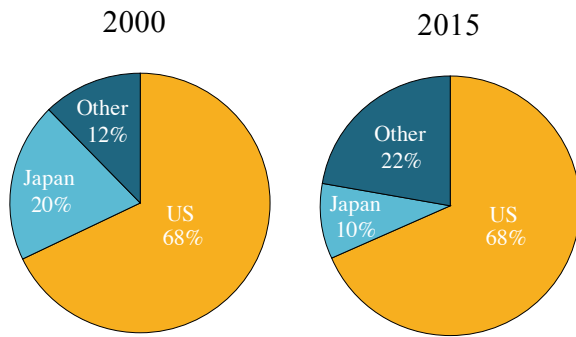
The US market, which makes up nearly 70% of all visitors, will grow by more than 4% this year as the moderate American economic expansion continues. The imminent addition of new flights from the US mainland by American, Alaska, and Delta airlines will help facilitate this growth.

After two years of double digit declines, the Japanese market—the county's second largest—will stabilize this year and begin to claw back some of the losses in 2017. The Japanese market share on the Big Island has fallen from 20% fifteen years ago to 9% today. The loss of Japanese visitors has been offset by other international travelers, whose share of total arrivals has doubled to 22% since the turn of the century. Prospects for the Japanese market will improve once airport renovations are made to allow direct international flights. US Customs and Border Protection standards require a \$50 million upgrade to Kona International Airport facilities before such flights can resume.

With an occupancy rate of about 67%, the industry has some room left to grow. In addition, the completion of several ongoing resort projects will expand the room supply. The third phase of Hilton's 124 suite Kings' Land resort is scheduled for opening mid-year, and 200 newly renovated rooms will become available at the Grand Naniloa Hotel in October. These new accommodations will come on at about the same rate as new arrivals, maintaining occupancy



## Big Island Visitor Shares



THE LOSS OF JAPANESE VISITORS HAS BEEN OFFSET BY OTHER INTERNATIONAL TRAVELERS.

rates in the 67-68% range, several percentage points below historical highs. As we have noted above, transient vacation rentals appear to be an increasingly important part of the room stock in Hawaii, and the Big Island is no exception. Available data make it difficult to accurately measure the number of such units, although they are likely to continue to grow in importance in coming years.

Several properties (including the Fairmont and the Waikoloa Marriott) have changed hands over the past year, and this will likely result in upgrades and renovations. The Hilton Waikoloa recently completed upgrades that should support somewhat higher room rates. Over the past few years, some resort operators, primarily of three and four star properties, have sacrificed revenue to fill beds. With occupancy rates now healthier, we expect a greater focus on raising revenue per available room.

Hawaii County's visitor industry will see steady gains in the 2-3% range this year and next, before easing below 1% growth in 2018. While the increments to visitor numbers will be smaller than in past years, the industry will continue to operate at historically high levels of activity.

## EMPLOYMENT AND INCOME

Since 2011, job growth on the Big Island has averaged 2% annually, and robust gains in 2016 will finally push

payroll counts above their pre-recession level. In recent months the pace of hiring has picked up speed: payroll jobs are up 4% in the year to date, and the unemployment rate dropped to a seasonally adjusted 3.9% in February. Improving conditions in the construction and visitor sectors will drive job growth of 2.6% this year, but the pace will slow subsequently as the business cycle expansion matures and employment growth converges to that of the underlying labor force.

Job growth will be broad-based this year, with the biggest gains in construction, health care, and accommodation and food services. Following double-digit gains last year, payrolls in the construction sector will expand by another 9% in 2016 and peak in 2018 at 4,500. Healthcare jobs have jumped up in recent months, possibly reflecting a shift of activity to the private sector after last year's cutbacks at state-owned hospitals in East Hawaii. Jobs in health care will continue to grow faster than total nonfarm employment to meet the needs of an aging population. The county's largest sector, accommodation and food services, will grow more than 3% this year then slow along with visitor growth. Throughout the islands, visitor industry leaders report difficulty filling vacant positions, which suggests that wage growth will remain robust.

Employment in our broad "other services" sector will grow at about a 2% rate for the next several years. This sector is largely driven by professional and business services and administrative and waste management. The category also includes high tech jobs associated with Natural Energy Laboratory Hawaii, Mauna Kea telescopes, and related activities. NELHA now hosts projects that extend beyond its core energy mandate, including shrimp cultivation, offshore fish farms, gourmet ice from deep-sea water, and a startup incubator. Mauna Kea has taken its hits this year, and we'll return to that later in the report. Although Big Island tech jobs remain scarce, high tech salaries are more than double the prevailing countywide wage.

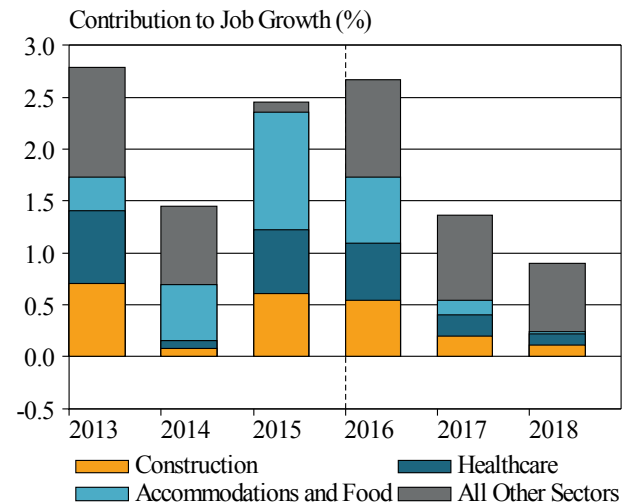
Government jobs will grow about 1% this year. Federal government employment will stabilize after the past several

years of fiscal challenges, and state and local government jobs will expand by nearly 1%. However, fiscal pressures will limit further expansion and prevent government from being a major driver of total employment growth.

Construction employment moved up strongly in 2015, and high-single-digit growth is expected this year as well. In the private sector, we are seeing some pick up of residential building from the very low levels reached during the downturn. Rising home prices are attracting new development, although real residential permitting values remain at only half the level seen at the 2005 peak of the bubble.

The number of new residential projects is limited. Brookfield Residential Hawaii has a forty-home project in Kona called Holua Kai at Keauhou. Prices are in the \$800,000 to \$1.7 million range. The first units are expected this fall. The Department of Hawaiian Home Lands is building the Lai Opua Village 4 Akau Subdivision in Kealahou for Hawaiian beneficiaries. Infrastructure work was just completed, and the first phase of 118 rent-to-own units should be completed by 2019. Forest City's Kamakana Villages project is expected to deliver a mix of more than 2,000 market and affordable homes over a twenty-year span. Initial infrastructure work, including a water production well that will serve North Kona, is ongoing, with home construction to follow.

There are several large public projects underway. The final phase of the \$68.5 million Hilo Harbor project, which involves the construction of a 602-foot reinforced concrete pier, is already under construction and will finish by July of next year. The new pier and an expanded container yard will avoid the current problem of intermingled cargo and cruise ship passengers. Work on a \$51 million segment of the Daniel K. Inouye Highway is expected to finish next year, and a \$100 million project to widen Queen Kaahumanu highway is expected to be completed in 2017. Other ongoing projects



TOURISM, HEALTH CARE, AND CONSTRUCTION WILL DRIVE JOB GROWTH IN HAWAII COUNTY IN 2016.

include \$23 million in sewer repairs and the upgrades to the Kona International Airport that we mentioned above. Plans for a new UH Pharmacy school in Hilo came in over budget, and UH is currently looking at ways to address the shortfall. There is a deadline of June 30 for the University to issue bonds that were authorized by the 2014 legislature.

As we are hearing on other islands, labor scarcity is causing headaches for the construction industry and pushing up costs. In the residential arena, many of the construction projects to date have focused on luxury homes, generating a high demand for specialized workers, which has driven up wages. Construction costs will act as a brake on growth over time. After this year's 9% gain, job growth in the industry will slow to about 3% next year and decline further thereafter. At the cycle's peak in 2018, there will be 1,300 fewer construction jobs than during the mid 2000's bubble.

Real (inflation-adjusted) personal income will continue to post the same healthy gains it has shown since 2014. With moderate employment growth and stable inflation expected this year, real income will grow about 3%. Tightening labor market conditions will continue to push up wages, but as the construction cycle eases over the next several years we expect income to slow to the two-and-a-half percent range. Note that

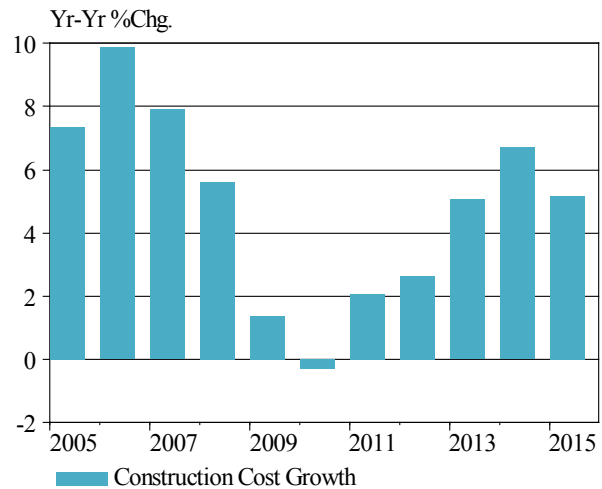
we use Honolulu consumer price measures when calculating inflation-adjusted values, since inflation statistics are not available for the Neighbor Islands.

## FINAL THOUGHTS

Big Island economic prospects look good, but not without challenges. The headline grabber last year was the surprisingly vehement opposition to the Thirty Meter Telescope and the resulting court ruling that threw out the construction permit and sent the project back to the Board of Land and Natural Resources. Now the BLNR's new hearings officer is set to schedule a new contested case hearing, but project opponents are charging that the BLNR did not follow its own rules when appointing the hearings officer. If the project cannot be built within the next several years, the TMT International Observatory Board has indicated its intention to move the project to an alternative site. Board members are actively pursuing locations in Chile, India, and the Canary Islands.

Losing the project would mean an annual loss of nearly \$1 million in lease rent, \$2 million in the development of STEM education and high-tech jobs, \$26 million in observatory operations, 300 temporary construction jobs, and 140 permanent operations staff members. A larger question is the effect this might have on the future of astronomy on the Island of Hawaii and perhaps the climate for advanced science more broadly.

Recent developments also remind us of the difficult challenges that face agriculture in Hawaii. Hamakua Springs recently shut down banana and tomato cultivation, in part because of pests, but also because of high costs. It is difficult for farmers to justify the investments necessary to run a successful operation here. And this is not a uniquely Hawaii Island story, but has played out in other parts of the state, with of course the highest profile recent casualty HC&S on



RIISING COSTS WILL BEGIN TO WEIGH ON CONSTRUCTION EXPANSION.

Maui. The industry is looking to adopt new or alternative processes to remain profitable. The newly formed Paniolo Cattle Company, a joint venture between Parker Ranch and the Ulupono Initiative, is developing a grass-fed cattle operation intended to increase the supply of local beef while insulating the company from volatile feed prices.

Labor market challenges come up in many of our discussions with business people in Hawaii County. Specialized labor is in short supply, but so also is the less-skilled labor needed in the visitor industry, retailing, and other areas. Again, this is not a uniquely Big Island story, but reflects common concerns we are hearing statewide. Tighter labor markets make this worse than a few years ago, but there are also more chronic concerns about worker education and training. These challenges will need to be addressed if satisfactory growth is to continue.

## MAUI COUNTY

Conditions are favorable for continued moderate economic growth in Maui County. The county's limited reliance on troubled foreign visitor markets means the tourism industry can capitalize on healthy mainland demand, although

slow expansion of lodging capacity will be a growing constraint. The construction cycle is past the period of fastest growth, but a high level of activity will be maintained for several more years. These conditions set the stage for further job and income gains.

## TOURISM

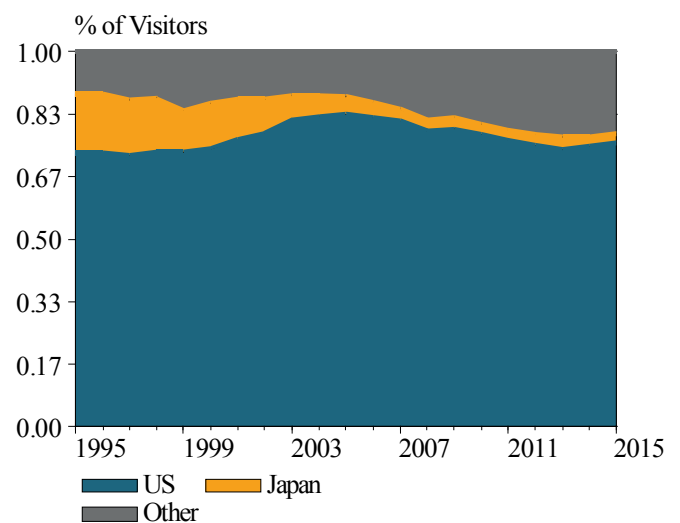
Following robust gains in 2015, tourism growth on Maui will begin to decelerate this year and reach a plateau toward the end of the decade. Ongoing US economic expansion will maintain forward momentum in the key mainland markets. At the same time, weak currencies will continue to weigh on international tourism. The modest anticipated increase in accommodations precludes significant additional visitor industry growth.

The ongoing US expansion bodes well for domestic tourism in 2016, and airlines have raised their planned airlift accordingly. The scheduled seats outlook points to a 1.5% increase in lift for the second quarter, with new flights by American, United, and Virgin Airlines. Makani Kai and Mokulele Airlines will expand inter-island service from Honolulu and Hawaii County to Molokai. Although Island Air canceled its Lanai service, Ohana by Hawaiian has rushed to fill the void with two new daily flights from Honolulu, restoring some of the original capacity.

Decelerating Chinese growth, weak commodity prices, and depreciating currencies are negatively affecting Maui's international visitor markets. International arrivals increased less than 1% last year and will manage just 1.5% growth in 2016. Still, these markets will remain important sources of growth over the next several years, expanding at a faster rate than the US market. Increased airline capacity will play a supportive role. Airlift from Canada, the county's largest international market, was projected to be 15% higher in the first quarter due to new direct flights from Vancouver.

A record number of visitors pushed occupancy rates above 75% in the final quarter of 2015. Due to the closure of the Makena resort, space will be even tighter this year, but new construction projects, including the Pihani Suites Hotel, Westin Nanea Ocean Villas, and the Hilton Grand Vacations, will more than replace these lost rooms by the end of 2017. The 217-room Four Seasons Resort Lanai has reopened after a complete renovation. The Four Seasons Resort, The Lodge at Koele, is renovating its 102-room hotel and will reopen later this year. As we have noted above, transient vacation rentals have become a more prominent component of the accommodation stock in Hawaii in recent years. According to the HTA, the island of Maui has the largest number of TVRs in the state, although there are significant challenges to identifying and accurately tallying such rooms. While their relative importance in the Maui County room stock is therefore hard to determine, we expect this to be an area of additional growth in coming years.

The US economy is holding up well against global headwinds, and domestic consumer spending continues to be healthy. As a result, the number of mainland visitors will



WHILE US TRAVELERS CONTINUE TO DOMINATE, INTERNATIONAL MARKETS OTHER THAN JAPAN ARE GROWING IN IMPORTANCE ON MAUI.

be 2% higher this year than last. Still, this is a significant slowing from 6% growth in 2015. Combined arrivals from all domestic and international markets, as well as total visitor days, will rise about 2%, after a strong 4-5% expansion last year. Occupancy rates exceeding 76% will put upward pressure on room rates, already the highest in the state, and eventually higher travel costs will curb the demand for Maui vacations. This will bring growth in visitor days down to the 1% range by 2017.

## JOBS AND INCOME

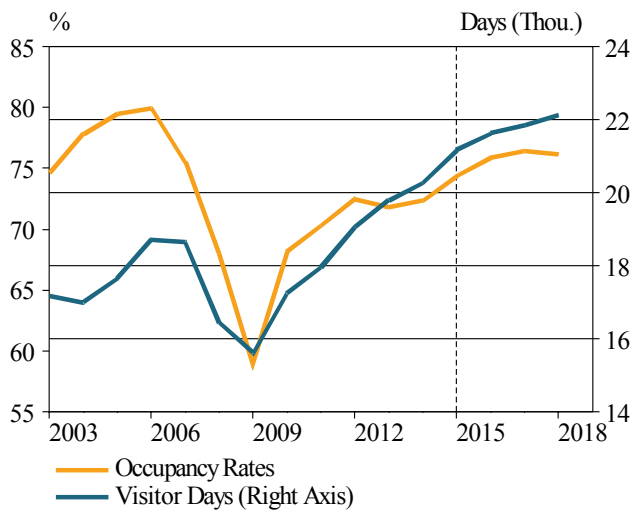
Job growth in the Maui County economy has averaged 2.5% since the recovery began, and similar growth over the past year has pushed the unemployment rate down to the lowest levels since the mid-2000s expansion. Unemployment stood at a seasonally adjusted 3.5% in February. Maui's labor market gains have been supported largely by the tourism and construction industries. Both areas will remain strong contributors to growth for the next several years, tapering off—and in the case of construction falling back—late in the decade. Service areas like health care will remain strong. The public sector will cease to be a drag, but tight

budget conditions ensure little in the way of government job growth in coming years.

Jobs in the accommodation and food services sector have hit record levels and, notwithstanding the closure of the Makena Resort, will expand by nearly 2% this year, accounting for more than 20% of the new jobs added. Gains in the sector will remain near 2% for the next several years, reflecting the still-healthy conditions in the industry. In fact, finding and keeping skilled employees is a growing concern in the hospitality sector.

The construction industry has continued to build in strength, and jobs surged 10% in 2015. Strong permitting reflects a large number of ongoing projects and new construction in the pipeline. Along with additions to the visitor accommodation inventory, new residential, commercial, and government projects are being developed. A \$350 million rental car facility at the Kahului Airport is set to begin construction in the next few months. Work is nearing completion on a \$74 million four-lane airport access road to replace the existing one. The road runs past Alexander & Baldwin's Maui Business Park, which has completed infrastructure work and has a number of commercial lots available.

The need for housing in the county will continue as the population grows and incomes rise. Population growth has averaged 1.3% since 2013, and it will remain near this range for the next several years. At the same time, the expanding economy will generate income gains that permit more home purchases. The County Council's decision to change affordable housing requirements for developers may also spur the development of new residential projects. Kamalani, Alexander & Baldwin's 630 unit project, which includes both market and affordable homes, is expected to deliver its first units in late 2017. A&B's Waiale South project, including 950 market and affordable homes, is awaiting approval



RECORD VISITOR NUMBERS WILL PUSH UP MAUI COUNTY OCCUPANCY RATES.



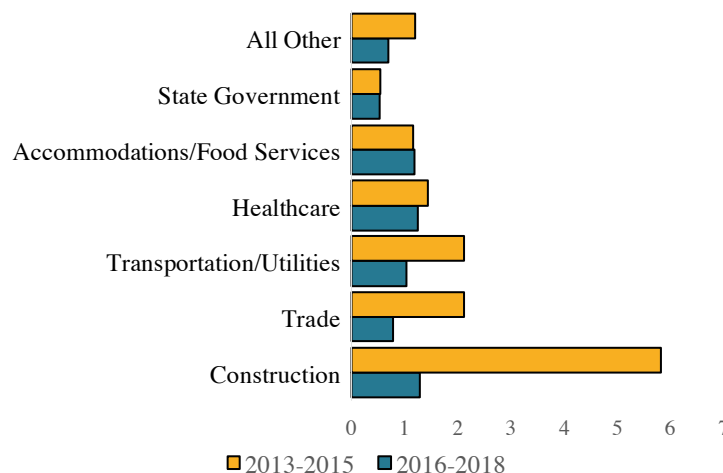
from the Maui Planning Commission. This project is the first phase of a master-planned community of up to 2,550 units. In April, developers of the proposed Olowalu Town development withdrew their petition to the state Land Use Commission, following an LUC rejection of the final EIS in December. The development had included plans for 1,500 homes, including 750 affordable units.

The healthy mix of residential, commercial and resort-related construction will maintain strong job growth this year, but employment gains will then decelerate. As the cycle matures, slowing economic conditions, rising interest rates, and affordability challenges for local home buyers will lead to slower growth. The construction cycle in Maui County will reach its peak at 4,200 jobs in 2018-2019, about 800 jobs fewer than at the 2007 peak of the housing bubble.

This year layoffs at the Hawaiian Commercial & Sugar Co., the state's last sugar plantation, will lead to the loss of more than 675 jobs. This represents about 1% of Maui's labor force. The first wave of layoffs, about 100 employees, occurred in March. About half of the employees will be kept until the end of this year's harvest, but nearly all will lose their jobs by the end of the year. The HC&S closure will also affect other businesses on Maui, particularly those that provide agricultural supplies, energy, and real estate services. Direct vendor purchases by HC&S amount to about \$60 million a year, but there will be additional indirect effects throughout the economy.

Health care in the county is undergoing structural changes with the first private acquisition of Hawaii state hospitals. Kaiser Permanente has signed a thirty-year transfer agreement beginning July 1st to take control of the Maui Memorial Medical Center, Kula Hospital, and Lanai Community Hospital. Over the next five years, Kaiser plans to spend at least \$20 million to upgrade the facilities, and

Annual Job Growth by Sector (%)



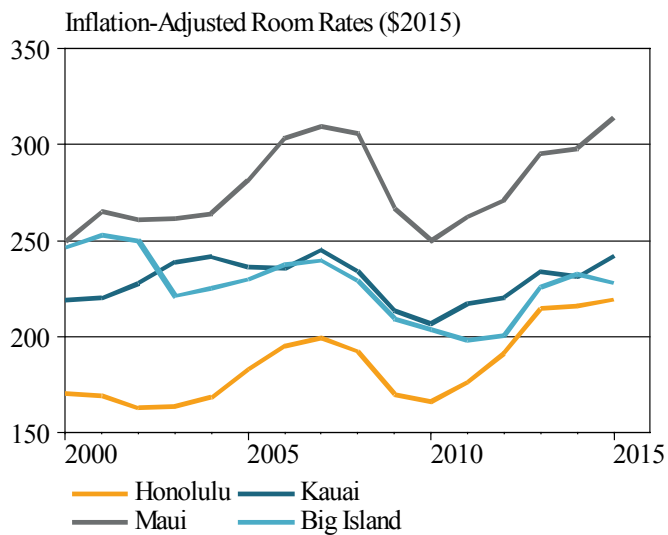
JOB GROWTH IN MAUI COUNTY WILL BE MORE BALANCED AS CONSTRUCTION APPROACHES PEAK.

the provider has already extended job offers to a number of the existing workers at each hospital. Once the transition is completed this summer, the reclassification of state employees as private sector healthcare workers will contribute to a greater than 4% increase in the official healthcare job count.

The public sector will take a breather from losses incurred during the recent period of acute fiscal challenges. We expect the number of government jobs to grow about half a percent this year. Over the next several years, most of the gains will occur in state and local government, while last year's conclusion of federal downsizing will usher in a period of flat federal jobs. Still, budgetary pressures at all levels of government will limit future job growth.

Maui County's aggregate job base will expand by 2% this year, decelerating to below 1.5% growth by 2017 as the lift from construction ends and growth across other sectors converges to a long-run path in line with population and labor force growth.

Gains in inflation-adjusted personal income have been uneven since the recovery began. Last year's decline in energy prices suppressed headline inflation, which in conjunction with strong construction and visitor markets propelled real income 4% higher. (See the discussion of local inflation in the Honolulu



MAUI RESORTS COMMAND LUXURY PRICES BUT NOW OPERATE IN AN INCREASINGLY COMPETITIVE ENVIRONMENT.

section, above. Consumer price data in Hawaii is available for the Honolulu MSA only.) Industry-specific income growth will follow job growth. In the near term, income gains will be largest in the construction sector, where a greater than 11% surge in 2016 will be followed by more moderate growth in subsequent years. Real income in the accommodation and food services sector will rise more than 3% this year, before tapering off as growth in the visitor industry slows. Limited by budgetary constraints, real income gains in the public sector will remain below 2%.

## CONCLUDING REMARKS

Maui county is well positioned for continued growth, if less buoyant than we have seen in the post-crisis recovery and the early stages of the current construction upswing. Looking beyond the immediate future, several issues will be important:

There is ongoing concern that Maui resorts are not investing enough in their properties to maintain the county's top satisfaction ratings. The resorts now command luxury prices, but they are operating in an increasingly competitive environment, where new world-class resorts in Mexico are becoming attractive alternatives. The need to boost quality

may of course represent an opportunity for hoteliers and local construction firms in coming years.

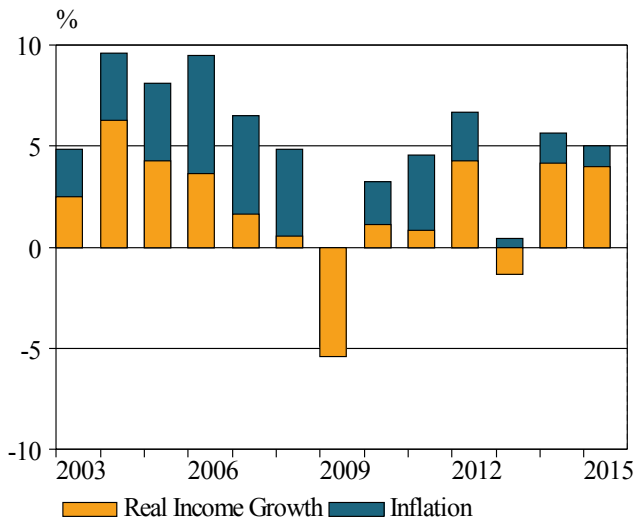
The Island of Lanai is undergoing a potentially dramatic transformation. Already, the Manele Bay resort has been transformed into an ultra-luxury class resort, with prices to match. Pulama Lanai is planning to rebuild a handful of single-family homes. Larry Ellison continues to upgrade infrastructure on the island. The changes will mean better options for local residents, but also perhaps changes in the style of life on the island.

As we noted above, Maui County has made changes to affordability requirements for new housing that should make it easier for developers to move new projects forward. At the same time, limited availability of drinking water remains a key challenge. Maui's "Show Me The Water" ordinance requires developers to provide evidence of adequate water resources for their projects. Developers argue that the policy is the reason for the stall on much-needed affordable housing units. The Department of Water Supply is currently drafting a Water Use and Development Plan that will seek to address water-related issues and could prompt changes to the ordinance.

Maui has not been immune from the assault on mountaintop telescopes by cultural and environmental activists. Last summer two hundred people gathered to protest the Daniel K. Inouye Solar Telescope being built at the Haleakala summit, and twenty were arrested. As on the Big Island, the protests may indicate a less hospitable environment for these marquee science projects and the healthy salaries that come with them.

## KAUAI COUNTY

The Kauai economy is poised for additional growth, spurred on by a construction sector that is just now hitting its stride. Visitor industry gains will back off a bit from last year's strong growth, but the level of activity in the sector



INFLATION IS TAKING A SMALLER BITE OUT OF MAUI COUNTY INCOME GAINS.

will remain high. Overall growth in jobs and income will trend lower now that the Island's workforce is nearly fully employed.

## TOURISM

Kauai's visitor industry posted a surprisingly strong year in 2015. Despite evident capacity pressures, resort development will permit further moderate tourism growth over the next several years, supported by healthy economic conditions on the US mainland and the continuing development of international markets other than Japan.

This year has gotten off to a slow start. Total arrivals to the county were unchanged from 2015 levels in the first quarter, although an increase in length of stay led to a slight increase in visitor days. Scheduled airline seats for direct flights to Kauai are expected to be flat in the second quarter, with new flights by Hawaiian Airlines offset by reduced service by United Airlines and Canadian air carrier Westjet. In recent weeks Island Air has restarted service to Lihue from Honolulu, which will boost interisland lift to the Garden Isle.

While there has been some diversification in recent years toward emerging international markets, the vast majority of visitors to Kauai still come from the US mainland. This has

insulated the county's visitor industry to some extent from the effect of recent currency fluctuations (although the Canadian market took a tumble). We expect roughly 2% growth for the US market in each of the next three years. Aggregate visitors from international markets other than Japan will see growth in a similar range.

The Kauai hotel occupancy rate hit a seasonally adjusted 74% in the fourth quarter of last year. While this is the highest rate since 2008, it remains nearly five percentage points below the peak levels reached in the mid-2000s. This picture of relatively mild capacity pressure stands in contrast to what we hear anecdotally, where some industry observers point to much higher usage levels once non-hotel visitor accommodations are considered. Time-share properties, resort condos, and transient vacation rentals make up a substantial share of the market on Kauai, and they generally have higher occupancy rates than hotels (a survey by Hospitality Advisors LLC puts time-share occupancy in the 88-90% range typically). Despite these caveats, the fact that hotel room rates are just now returning to pre-recession levels in inflation-adjusted terms suggests that some slack remains in island-wide visitor accommodations.

There are a number of new resort developments in the construction pipeline. Late last year, Timbers Resorts began redevelopment of the former Kauai Lagoons site into its new Hokualea resort. In Wailua, the redevelopment of the Coco Palms resort, shuttered since Hurricane Iniki in 1992, may finally be moving forward, given recent indications that the developer may be close to arranging full financing. Phase three at Koloa Landing is slated to finish by the end of this year. The Coconut Plantation resort in Waipouli may begin construction in late fall, and the Hanalei Plantation resort may also break ground in 2016. The Sheraton Kauai is underway on a conversion of its garden wing to timeshares, and a renovation of the ocean side hotel rooms is slated for later this year.

With visitor volume at an all time high, there has been considerable discussion of the impact of tourism on the Garden Isle's infrastructure. Visitors make up roughly one-quarter of all people on the island on a typical day. In addition to perennial traffic headaches, the large number of visitors puts stress on recreational areas. At Haena State Park / Kee Beach (and the entrance to the Kalalau Trail), proposed plans would impose Hanauma Bay style caps on the number of daily visitors and cars, as well as emphasize the area's cultural and historical significance.

Overall, we expect moderate further expansion of the Kauai visitor sector. The number of arrivals will grow by roughly 2% annually for the next several years. Late in the decade, growth will slow as capacity constraints become more of an issue. By 2018, the number of annual visitor days, which takes into account length of stay, will be 15% above the 2007 pre-recession peak.

## EMPLOYMENT AND INCOME

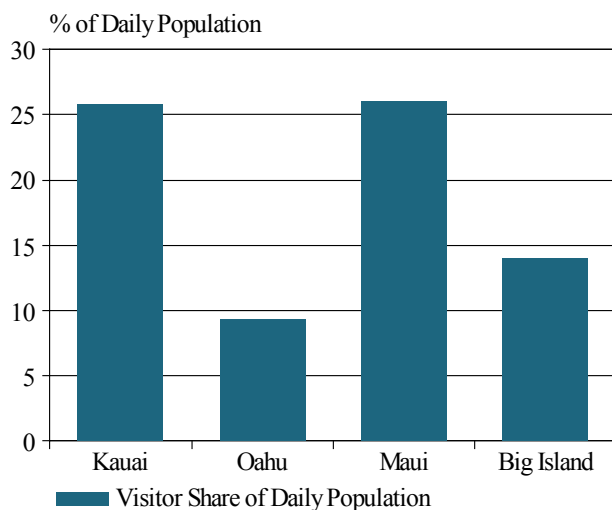
The Kauai labor market has taken a long time to recover from the Great Recession. Between 2007 and 2009, the county lost nearly 3,000 jobs, and since then payrolls

have expanded at only a 1.4% annual average rate. But total nonfarm payrolls are now within 300 of their previous peak. The unemployment rate stood at a seasonally adjusted 3.6% rate in February, just one percentage point higher than levels seen during the 2005-2007 boom. Payroll job growth will pick up a bit this year, slowing later in the decade as the construction cycle wanes and the county converges onto its trend growth path.

The Kauai construction industry turned the corner convincingly last year, and we expect strong expansion to continue this year. Last year construction hiring surged by double digits each quarter, peaking at more than 20% growth year-over-year in the fourth quarter. The industry remains smaller than during the late-2000 bubble years, but further growth will bring total employment to 1,800 workers at its peak late in the decade.

In addition to the resort developments we discussed above, there are several residential and retail projects in the works. Early last year, work got underway at PiliMai, a 191-unit luxury townhouse development in Poipu. Last summer, work was completed at Kolopua, a workforce rental project in Princeville, and earlier this year construction began at Kanikoo Phase II, an affordable senior living complex in Lihue. On the commercial side, construction was completed earlier this year on the Garden Isle's first Kaiser Permanente clinic, and the Kilauea Lighthouse Village may break ground later this year.

Sales continue at Kukuiula, Alexander & Baldwin's large residential complex on the South Shore, which has entitlement for 750 units. The HoKua Place subdivision, which could eventually bring 769 units to the Kapaa area, is before the State Land Use Commission, where it faces challenges related to traffic. A draft environmental impact statement is currently open for public comment. DR Horton-Schuler Homes' planned Koheo Loa Project would bring nearly 300 units to the 50-acre Hanamaulu Triangle property.



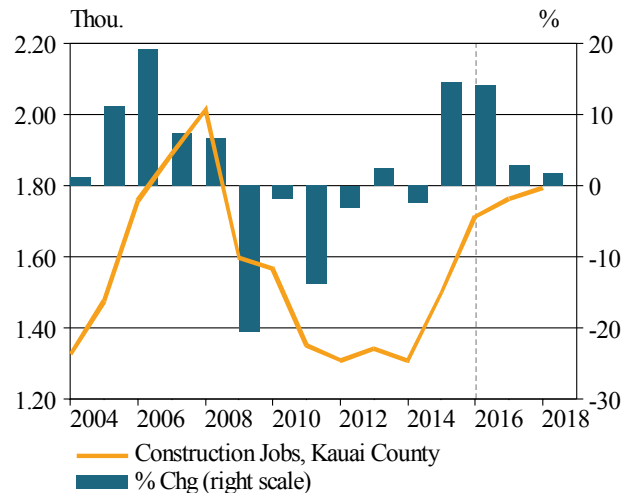
ON A TYPICAL DAY, VISITORS MAKE UP ROUGHLY ONE-QUARTER OF KAUAI'S POPULATION.

The Kauai real estate market has seen considerable improvement, and both 2014 and 2015 were very strong sales years. Prices in inflation-adjusted terms have now returned to levels seen in the early 2000s, if below those at the mid-decade market peak. Sales are led by domestic buyers, who are benefiting from low interest rates, the lift to disposable income from lower energy costs, and more secure employment conditions. Affordability remains the key challenge, and we will have more to say about this issue below.

Outside of construction, moderate job growth will continue in most industries, tapering off over the next several years as the economy pushes up against full employment. Jobs in the accommodation and food services sector are now well above pre-recession levels, and incremental tourism gains will generate job growth in the 1-2% range. Buoyant construction will lift growth in the trade sector, which has languished recently. Jobs in our broad other services category will continue to see steady growth averaging about 1.5% over the next three years. The public sector, which was a significant drag on growth in 2015, will firm this year, but budgetary constraints at the federal, state, and local levels will hold job growth well below 1% for the next several years.

Health care on the Garden Isle is in transition. Last year, the troubled Hawaii Health Systems Corporation laid off thirty employees on Kauai; at the moment there is no talk of privatizing Kauai facilities. Meanwhile private sector health care continues to expand, and we project that growth will continue to exceed that of the overall economy as the population ages and health spending rises.

Kauai agriculture continues to see new opportunities, but also new controversy. The seed corn industry, the largest agricultural player on Kauai, has scaled back Kauai operations somewhat, although this apparently is driven less by domestic pushback and more by weak global conditions. Efforts by the Ulupono initiative to establish a grass-fed



THE KAUAI CONSTRUCTION INDUSTRY TURNED THE CORNER CONVINCINGLY LAST YEAR.

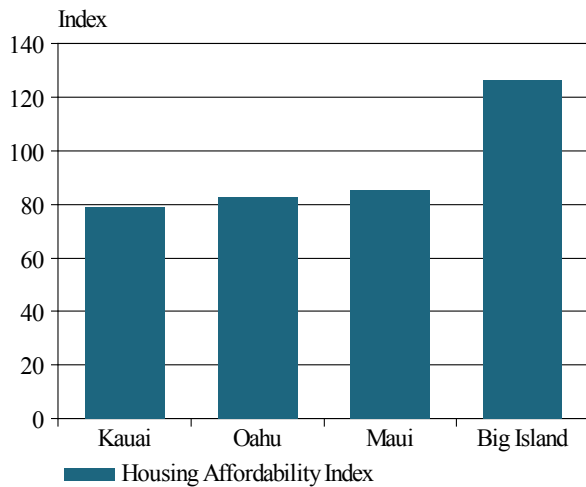
dairy farm face opposition from nearby resort interests and environmentalists. As elsewhere in the state, Kauai agriculture faces the challenge of high costs and a shortage of farmers who are equipped to maintain profitable businesses.

Kauai's energy sector is being transformed. Prompted in part by the State's renewable energy mandate, the Kauai Island Utility Cooperative is engineering a very rapid shift to renewable sources of power. This has been facilitated by technological changes that have sharply reduced costs. Kauai has been able to move faster than other counties, in part because of lower land costs and also financial advantages of the electrical utility's coop structure. With several recent and planned investments, KIUC is on track to have more than 50% of energy from renewables by 2020.

Overall job growth on Kauai Island will accelerate from 1.4% in 2015 to more than 2% this year, supported by surging construction and solid growth across a number of service sectors. The pace of hiring will drop back in 2017 and beyond, easing toward 1% as the construction cycle approaches its peak and the business cycle matures.

We estimate that the Garden Isle saw a healthy gain of 3.4% in real (inflation-adjusted) income last year. (Note that Neighbor Island income is deflated by the Honolulu CPI,





KAUAI IS AMONG THE LEAST AFFORDABLE HOUSING MARKETS IN HAWAII.

the only measure of consumer prices available in the state.) Strong construction growth and mild inflation will support modest income gains over the next three years; we expect real income growth rates in the mid-2% range through 2018.

## STRUGGLING THROUGH CHALLENGES

Against this backdrop of healthy growth, Kauai faces a number of challenges. Chief among these are concerns about the limits to Kauai's infrastructure and consequences for the Island's lifestyle. In addition to proposals to limit impacts on parks, there are efforts to address traffic woes, including last

year's trial of a shuttle service on the North Shore and the addition of bypass lanes at some key highway interchanges. Increasing demands on existing resources raise concerns about pushback against tourism, as well as resistance to needed housing.

And new housing will be needed going forward. Measured by the ratio of median single-family home price to household income, Kauai is among the least affordable housing markets in Hawaii. Current rates of homebuilding are limited, and an important part of this is at the high end. On an island where residents worry about overbuilding, novel approaches may have a role to play. Currently lawmakers are considering a bill that would permit landowners to construct an additional rental unit on their property, similar to an ordinance that has been adopted on Oahu.

A final concern is Kauai's limited workforce. With unemployment rates receding to normal levels, firms are reporting difficulty hiring workers with specialized skills, but they also express concern about inadequate preparation of workers at nearly every skill level. These concerns are not lost on civic leaders, who are working to improve and realign training programs with skills that are in high demand. Progress in this area will be important to maintaining economic opportunity on Kauai.

TABLE 1: MAJOR ECONOMIC INDICATOR SUMMARY  
HONOLULU COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Non-farm Jobs (Thou)	456.6	462.2	468.4	475.2	479.2	481.7
% Change	1.9	1.2	1.3	1.5	0.8	0.5
Employment (Thou)	431.0	444.0	453.0	461.1	463.6	464.5
% Change	1.6	3.0	2.0	1.8	0.5	0.2
Unemployment Rate (%)	4.4	4.1	3.4	2.8	2.7	2.8
Total Population (Thou)	986.9	992.2	998.8	1,000.3	1,003.9	1,007.6
% Change	1.0	0.5	0.7	0.1	0.4	0.4
Total Personal Income (Mil \$)	47,255.8	49,313.3	51,549.4	53,232.9	55,345.1	57,712.3
% Change	0.4	4.4	4.5	3.3	4.0	4.3
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Real Personal Income (Mil 2015 \$)	48,417.3	49,806.4	51,549.4	52,471.8	53,310.3	53,921.0
% Change	-1.3	2.9	3.5	1.8	1.6	1.1
Real Per Capita Income (Thou 2015 \$)	49.1	50.2	51.6	52.5	53.1	53.5
% Change	-2.3	2.3	2.8	1.6	1.2	0.8
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	5,044.3	5,176.9	5,321.4	5,399.3	5,438.7	5,463.9
% Change	2.9	2.6	2.8	1.5	0.7	0.5
U.S. Visitors	2,444.6	2,510.3	2,592.6	2,659.8	2,679.8	2,683.4
% Change	1.5	2.7	3.3	2.6	0.8	0.1
Japanese Visitors	1,458.2	1,469.4	1,454.1	1,434.3	1,445.7	1,454.9
% Change	3.4	0.8	-1.0	-1.4	0.8	0.6
Other Visitors	1,141.5	1,197.1	1,274.7	1,305.2	1,313.3	1,325.6
% Change	5.2	4.9	6.5	2.4	0.6	0.9
Avg. Length of Stay (Days)	7.0	6.8	6.8	6.8	6.9	6.9
Visitor Days (Thou Days)	35,497.3	35,050.2	36,340.5	36,757.8	37,317.0	37,691.3
% Change	-1.8	-1.3	3.7	1.1	1.5	1.0
Occupancy Rate (%)	83.8	84.3	85.4	86.1	84.7	83.0
Total Room Stock (Thou)	35.8	35.6	34.8	35.2	36.7	38.0
% Change	1.0	-0.7	-2.1	1.2	4.0	3.5

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 Income are UHERO estimates. Figures for 2013 - 2015 room stock are UHERO estimates. Figures for 2016 - 2018 are forecasts.

TABLE 2: JOBS BY DETAILED SECTOR (THOUSANDS)  
HONOLULU COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Total Non-farm Jobs	456.6	462.2	468.4	475.2	479.2	481.7
% Change	1.9	1.2	1.3	1.5	0.8	0.5
Construction and Mining	23.1	23.9	25.8	28.2	28.7	28.7
% Change	4.5	3.7	7.7	9.5	1.7	-0.1
Manufacturing	10.8	11.0	11.2	11.1	11.1	11.2
% Change	1.3	1.8	1.0	-0.4	0.1	0.8
Trade	62.0	61.7	62.0	62.2	62.7	62.9
% Change	0.8	-0.6	0.5	0.2	0.8	0.3
Transportation and Utilities	21.5	21.9	22.2	22.6	23.0	23.2
% Change	4.8	2.0	1.3	1.7	1.7	0.9
Finance, Insurance and Real Estate	20.5	20.8	21.1	21.3	21.5	21.5
% Change	0.9	1.5	1.6	0.7	0.9	0.2
Services	221.1	224.1	227.1	230.6	232.6	234.3
% Change	3.0	1.4	1.3	1.5	0.9	0.7
Health Care and Soc. Assistance	49.6	50.4	52.0	53.3	54.0	54.7
% Change	2.8	1.7	3.1	2.6	1.2	1.4
Accommodation and Food	59.3	60.5	60.6	61.3	61.8	62.3
% Change	3.5	2.0	0.1	1.1	0.8	0.9
Other	112.2	113.2	114.6	116.0	116.9	117.2
% Change	2.9	0.9	1.2	1.3	0.7	0.3
Government	97.6	98.7	99.0	99.2	99.6	99.9
% Change	-1.0	1.2	0.3	0.2	0.4	0.3
Federal Government	31.1	30.5	30.5	30.6	30.6	30.6
% Change	-3.0	-1.9	0.0	0.3	0.0	-0.2
State and Local Government	66.5	68.2	68.5	68.6	69.0	69.3
% Change	0.0	2.6	0.4	0.2	0.6	0.5

Note: Source is UHERO. Figures for 2016 - 2018 are forecasts.

TABLE 3: PERSONAL INCOME BY DETAILED SECTOR  
HONOLULU COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Real Personal Income (Mil 2015 \$ )	48,417.3	49,806.4	51,549.4	52,471.8	53,310.3	53,921.0
% Change	-1.3	2.9	3.5	1.8	1.6	1.1
Labor & Proprietors' Income	35,996.5	36,707.2	37,992.8	38,837.2	39,473.5	39,856.1
% Change	-0.2	2.0	3.5	2.2	1.6	1.0
Agriculture	103.7	109.2	121.7	124.1	125.1	127.4
% Change	6.6	5.3	11.4	2.0	0.8	1.8
Construction and Mining	2,476.6	2,595.6	2,919.7	3,191.8	3,296.7	3,305.0
% Change	2.6	4.8	12.5	9.3	3.3	0.3
Manufacturing	691.9	710.8	728.1	737.3	741.9	747.7
% Change	0.6	2.7	2.4	1.3	0.6	0.8
Total Trade	2,995.2	3,000.0	3,042.8	3,081.4	3,103.3	3,128.8
% Change	1.3	0.2	1.4	1.3	0.7	0.8
Transportation and Utilities	1,738.8	1,795.7	1,874.0	1,911.7	1,958.7	1,988.1
% Change	7.0	3.3	4.4	2.0	2.5	1.5
Finance, Insurance & Real Estate	2,392.3	2,367.9	2,514.2	2,582.4	2,662.1	2,711.5
% Change	-7.0	-1.0	6.2	2.7	3.1	1.9
Services	13,257.9	13,569.0	14,031.4	14,426.6	14,733.3	14,968.4
% Change	2.0	2.3	3.4	2.8	2.1	1.6
Health Care and Soc. Assist. (% Ch)	2.5	2.3	4.9	4.1	2.5	2.3
Accommodation and Food (% Ch)	4.3	3.2	3.2	2.2	1.1	1.4
Other (% Ch)	1.2	2.1	2.8	2.4	2.2	1.3
Government	12,340.2	12,558.9	12,761.1	12,781.9	12,852.4	12,879.3
% Change	-3.0	1.8	1.6	0.2	0.6	0.2
Federal Government (% Ch)	-6.3	1.5	1.8	1.0	0.7	0.5
State and Local Government (% Ch)	1.2	4.5	3.4	0.3	1.4	0.6
Less Social Security Taxes (-)	4,290.9	4,242.7	4,312.5	4,362.9	4,444.6	4,492.5
% Change	13.7	-1.1	1.6	1.2	1.9	1.1
Transfer Payments	6,842.0	7,133.3	7,341.6	7,418.2	7,577.6	7,753.9
% Change	1.5	4.3	2.9	1.0	2.1	2.3
Dividends, Interest and Rent	9,891.0	10,231.4	10,527.5	10,579.3	10,703.8	10,803.5
% Change	-1.5	3.4	2.9	0.5	1.2	0.9
Total Population (Thou)	986.9	992.2	998.8	1,000.3	1,003.9	1,007.6
% Change	1.0	0.5	0.7	0.1	0.4	0.4
Real Per Capita Income (Thou 2015 \$ )	49.1	50.2	51.6	52.5	53.1	53.5
% Change	-2.3	2.3	2.8	1.6	1.2	0.8
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Nominal Personal Income (Mil \$)	47,255.8	49,313.3	51,549.4	53,232.9	55,345.1	57,712.3
% Change	0.4	4.4	4.5	3.3	4.0	4.3

Note: Source is UHERO. Figures for 2015 income are UHERO estimates. Figures for 2016 - 2018 are forecasts.

TABLE 4: MAJOR ECONOMIC INDICATOR SUMMARY  
HAWAII COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Non-farm Jobs (Thou)	63.2	64.1	65.5	67.2	68.1	68.8
% Change	2.6	1.4	2.2	2.6	1.4	1.0
Total Population (Thou)	191.2	194.0	196.4	199.5	202.5	205.4
% Change	1.3	1.5	1.2	1.6	1.5	1.4
Total Personal Income (Mil \$)	6,425.0	6,771.3	7,107.0	7,434.1	7,828.3	8,275.3
% Change	2.4	5.4	5.0	4.6	5.3	5.7
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Real Personal Income (Mil 2015 \$)	6,582.9	6,839.0	7,107.0	7,327.8	7,540.5	7,731.6
% Change	0.6	3.9	3.9	3.1	2.9	2.5
Real Per Capita Income (Thou 2015 \$)	34.4	35.3	36.2	36.7	37.2	37.7
% Change	-0.7	2.4	2.6	1.5	1.4	1.1
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	1,435.2	1,449.1	1,503.5	1,549.5	1,587.5	1,603.3
% Change	0.1	1.0	3.8	3.1	2.5	1.0
U.S. Visitors	946.8	972.0	1,027.2	1,071.1	1,088.6	1,094.2
% Change	-0.8	2.7	5.7	4.3	1.6	0.5
Japanese Visitors	199.1	170.5	141.8	141.5	147.5	151.3
% Change	-1.9	-14.4	-16.8	-0.2	4.2	2.6
Other Visitors	289.3	306.6	334.5	336.9	351.4	357.8
% Change	4.8	6.0	9.1	0.7	4.3	1.8
Avg. Length of Stay (Days)	7.5	7.5	7.5	7.7	7.7	7.6
Visitor Days (Thou Days)	10,725.3	10,930.8	11,330.5	11,893.5	12,151.9	12,249.7
% Change	2.8	1.9	3.7	5.0	2.2	0.8
Occupancy Rate (%)	61.1	61.3	67.0	67.0	67.3	67.1
Total Room Stock (Thou)	11.5	11.4	11.5	11.6	11.6	11.7
% Change	1.2	-1.1	1.3	0.6	0.4	0.4

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 Income are UHERO estimates. Figures for 2013 - 2015 room stock are UHERO estimates. Figures for 2016 - 2018 are forecasts.



TABLE 5: JOBS BY DETAILED SECTOR (THOUSANDS)  
HAWAII COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Total Non-farm Jobs	63.2	64.1	65.5	67.2	68.1	68.8
% Change	2.6	1.4	2.2	2.6	1.4	1.0
Construction and Mining	3.5	3.5	3.9	4.3	4.4	4.5
% Change	14.2	1.4	11.1	9.1	3.2	1.7
Manufacturing	1.3	1.3	1.2	1.2	1.2	1.2
% Change	-0.6	-1.3	-7.2	3.5	0.3	-0.5
Trade	10.5	10.7	10.7	10.9	11.0	11.1
% Change	1.0	1.4	0.2	1.8	1.0	0.9
Transportation and Utilities	2.8	2.9	3.1	3.2	3.2	3.3
% Change	4.6	3.8	5.9	1.3	2.0	1.3
Finance, Insurance and Real Estate	2.6	2.6	2.7	2.7	2.7	2.7
% Change	-1.9	-0.3	1.0	0.2	1.0	0.2
Services	29.8	30.0	30.7	31.7	32.1	32.5
% Change	3.4	0.6	2.2	3.2	1.4	1.3
Health Care and Soc. Assistance	6.9	6.9	7.1	7.4	7.5	7.7
% Change	4.6	-0.1	3.2	4.4	1.8	2.2
Accommodation and Food	11.3	11.7	12.4	12.8	12.9	12.9
% Change	1.8	3.0	6.2	3.4	0.7	0.2
Other	11.6	11.5	11.2	11.4	11.6	11.9
% Change	4.4	-1.3	-2.3	2.1	1.8	1.9
Government	12.6	13.0	13.2	13.3	13.5	13.6
% Change	-0.1	3.1	1.5	0.7	1.1	0.7
Federal Government	1.4	1.4	1.3	1.3	1.3	1.3
% Change	-1.2	-3.5	-3.0	0.1	0.7	0.3
State and Local Government	11.2	11.7	11.9	12.0	12.1	12.2
% Change	0.1	3.9	2.1	0.8	1.1	0.7

Note: Source is UHERO. Figures for 2016 - 2018 are forecasts.

TABLE 6: PERSONAL INCOME BY DETAILED SECTOR  
HAWAII COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Real Personal Income (Mil 2015 \$ )	6,582.9	6,839.0	7,107.0	7,327.8	7,540.5	7,731.6
% Change	0.6	3.9	3.9	3.1	2.9	2.5
Labor & Proprietors' Income	3,995.2	4,097.6	4,263.8	4,415.6	4,524.2	4,618.3
% Change	2.0	2.6	4.1	3.6	2.5	2.1
Agriculture	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Construction and Mining	318.4	343.7	389.3	434.1	460.1	476.1
% Change	5.8	7.9	13.3	11.5	6.0	3.5
Manufacturing	62.7	71.0	66.9	70.1	70.0	69.4
% Change	-2.8	13.3	-5.8	4.8	-0.1	-0.8
Total Trade	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Transportation and Utilities	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Finance, Insurance & Real Estate	254.5	254.2	--	--	--	--
% Change	-5.3	-0.1	--	--	--	--
Services	1,611.4	1,637.8	1,698.1	1,760.4	1,793.1	1,828.9
% Change	2.9	1.6	3.7	3.7	1.9	2.0
Health Care and Soc. Assist. (% Ch)	3.1	0.1	3.2	5.4	3.1	2.8
Accommodation and Food (% Ch)	2.6	4.2	9.1	4.9	1.2	0.8
Other (% Ch)	3.0	0.6	-0.1	1.6	1.6	2.5
Government	983.8	1,016.0	1,035.8	1,053.8	1,073.9	1,095.0
% Change	1.2	3.3	1.9	1.7	1.9	2.0
Federal Government (% Ch)	-3.2	0.0	0.9	0.3	1.4	1.2
State and Local Government (% Ch)	2.3	4.3	2.2	2.1	2.1	2.1
Less Social Security Taxes (-)	491.3	485.5	497.5	507.2	515.6	524.4
% Change	16.4	-1.2	2.5	2.0	1.7	1.7
Transfer Payments	1,632.7	1,730.4	1,811.7	1,873.3	1,940.2	2,000.8
% Change	2.2	6.0	4.7	3.4	3.6	3.1
Dividends, Interest and Rent	1,435.7	1,485.0	1,529.2	1,545.6	1,591.5	1,636.8
% Change	-0.4	3.4	3.0	1.1	3.0	2.8
Total Population (Thou)	191.2	194.0	196.4	199.5	202.5	205.4
% Change	1.3	1.5	1.2	1.6	1.5	1.4
Real Per Capita Income (Thou 2015 \$ )	34.4	35.3	36.2	36.7	37.2	37.7
% Change	-0.7	2.4	2.6	1.5	1.4	1.1
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Nominal Personal Income (Mil \$)	6,425.0	6,771.3	7,107.0	7,434.1	7,828.3	8,275.3
% Change	2.4	5.4	5.0	4.6	5.3	5.7

Note: Source is UHERO. Figures for 2015 income are UHERO estimates. Figures for 2016 - 2018 are forecasts. Because of data disclosure rules, industry-level income is not available for all sectors.

TABLE 7: MAJOR ECONOMIC INDICATOR SUMMARY  
MAUI COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Non-farm Jobs (Thou)	69.9	71.4	73.1	74.6	75.6	76.6
% Change	2.7	2.2	2.4	2.0	1.4	1.4
Total Population (Thou)	160.9	163.4	164.6	166.8	169.1	171.3
% Change	1.5	1.5	0.8	1.3	1.4	1.3
Total Personal Income (Mil \$)	6,086.2	6,432.8	6,758.4	7,028.8	7,353.3	7,782.7
% Change	0.4	5.7	5.1	4.0	4.6	5.8
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Real Personal Income (Mil 2015 \$)	6,235.8	6,497.1	6,758.4	6,928.3	7,082.9	7,271.5
% Change	-1.4	4.2	4.0	2.5	2.2	2.7
Real Per Capita Income (Thou 2015 \$)	38.7	39.8	41.1	41.5	41.9	42.5
% Change	-2.9	2.6	3.2	1.2	0.8	1.4
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	2,401.7	2,449.7	2,566.1	2,614.6	2,648.8	2,689.3
% Change	2.1	2.0	4.8	1.9	1.3	1.5
U.S. Visitors	1,774.4	1,830.0	1,942.4	1,981.2	2,002.9	2,032.3
% Change	0.4	3.1	6.1	2.0	1.1	1.5
Japanese Visitors	80.8	60.8	61.3	60.5	58.7	57.4
% Change	15.9	-24.8	0.9	-1.3	-3.0	-2.2
Other Visitors	546.5	559.0	562.5	572.9	587.2	599.6
% Change	5.8	2.3	0.6	1.9	2.5	2.1
Avg. Length of Stay (Days)	8.2	8.3	8.3	8.3	8.2	8.2
Visitor Days (Thou Days)	19,789.5	20,269.6	21,170.7	21,625.9	21,846.0	22,118.0
% Change	3.9	2.4	4.4	2.2	1.0	1.2
Occupancy Rate (%)	71.8	72.3	74.4	75.9	76.4	76.2
Total Room Stock (Thou)	22.5	22.5	22.6	22.7	23.1	23.5
% Change	1.2	0.2	0.5	0.4	1.7	1.9

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 Income are UHERO estimates. Figures for 2013 - 2015 room stock are UHERO estimates. Figures for 2016 - 2018 are forecasts.

TABLE 8: JOBS BY DETAILED SECTOR (THOUSANDS)  
MAUI COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Total Non-farm Jobs	69.9	71.4	73.1	74.6	75.6	76.6
% Change	2.7	2.2	2.4	2.0	1.4	1.4
Construction and Mining	3.1	3.4	3.7	4.0	4.1	4.2
% Change	5.4	7.5	10.2	8.8	2.8	1.1
Manufacturing	1.1	1.2	1.2	1.2	1.1	1.0
% Change	4.7	7.5	0.0	-3.2	-9.3	-1.0
Trade	10.5	10.8	11.2	11.4	11.5	11.6
% Change	2.3	2.5	3.9	1.5	0.8	1.5
Transportation and Utilities	3.7	3.7	4.0	4.0	4.1	4.1
% Change	-0.4	0.0	6.5	1.1	1.9	1.2
Finance, Insurance and Real Estate	2.7	2.8	2.9	2.9	2.9	2.9
% Change	7.4	3.4	4.5	0.8	0.9	0.1
Services	39.1	39.8	40.4	41.3	42.0	42.8
% Change	3.4	1.9	1.5	2.2	1.8	1.8
Health Care and Soc. Assistance	5.2	5.2	5.4	5.7	5.8	5.9
% Change	3.8	-0.6	5.0	4.2	1.6	2.1
Accommodation and Food	20.6	21.1	21.3	21.8	22.2	22.6
% Change	3.0	2.4	1.1	2.1	1.8	1.7
Other	13.2	13.5	13.6	13.8	14.1	14.3
% Change	3.7	2.1	1.0	1.4	1.7	1.7
Government	9.7	9.8	9.8	9.8	9.9	10.0
% Change	-0.3	1.4	-0.5	0.6	1.0	0.6
Federal Government	0.9	0.8	0.8	0.8	0.8	0.8
% Change	-3.7	-6.8	0.0	0.1	0.7	0.4
State and Local Government	8.8	9.0	9.0	9.0	9.1	9.2
% Change	0.1	2.2	-0.6	0.6	1.0	0.6

Note: Source is UHERO. Figures for 2016 - 2018 are forecasts.

TABLE 9: PERSONAL INCOME BY DETAILED SECTOR  
MAUI COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Real Personal Income (Mil 2015 \$ )	6,235.8	6,497.1	6,758.4	6,928.3	7,082.9	7,271.5
% Change	-1.4	4.2	4.0	2.5	2.2	2.7
Labor & Proprietors' Income	4,383.3	4,524.8	4,717.6	4,851.8	4,938.3	5,055.1
% Change	1.1	3.2	4.3	2.8	1.8	2.4
Agriculture	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Construction and Mining	334.5	356.5	400.7	445.7	470.5	484.1
% Change	-3.6	6.6	12.4	11.2	5.6	2.9
Manufacturing	63.3	67.8	68.9	67.4	61.0	60.1
% Change	-0.5	7.1	1.6	-2.1	-9.6	-1.4
Total Trade	469.8	485.4	504.2	510.0	517.9	528.1
% Change	1.6	3.3	3.9	1.2	1.6	2.0
Transportation and Utilities	252.1	244.9	265.6	269.4	274.1	279.5
% Change	5.5	-2.9	8.4	1.4	1.7	2.0
Finance, Insurance & Real Estate	254.5	266.8	279.7	284.9	301.6	314.7
% Change	-6.1	4.9	4.8	1.9	5.8	4.3
Services	2,127.8	2,191.2	2,274.2	2,338.8	2,388.2	2,445.5
% Change	3.2	3.0	3.8	2.8	2.1	2.4
Health Care and Soc. Assist. (% Ch)	2.3	-0.1	5.1	5.2	3.0	2.7
Accommodation and Food (% Ch)	5.2	3.9	3.8	3.6	2.3	2.4
Other (% Ch)	1.1	3.0	3.3	0.9	1.4	2.3
Government	779.6	807.8	808.9	821.9	836.6	852.3
% Change	-0.2	3.6	0.1	1.6	1.8	1.9
Federal Government (% Ch)	-4.0	-1.4	4.1	0.4	1.4	1.3
State and Local Government (% Ch)	0.5	4.7	-0.4	1.9	1.9	2.0
Less Social Security Taxes (-)	533.5	527.2	541.3	548.1	553.5	564.5
% Change	16.6	-1.2	2.7	1.2	1.0	2.0
Transfer Payments	1,055.3	1,121.1	1,168.1	1,205.2	1,246.6	1,283.8
% Change	1.1	6.2	4.2	3.2	3.4	3.0
Dividends, Interest and Rent	1,323.1	1,370.7	1,414.3	1,419.6	1,452.1	1,497.6
% Change	-5.1	3.6	3.2	0.4	2.3	3.1
Total Population (Thou)	160.9	163.4	164.6	166.8	169.1	171.3
% Change	1.5	1.5	0.8	1.3	1.4	1.3
Real Per Capita Income (Thou 2015 \$ )	38.7	39.8	41.1	41.5	41.9	42.5
% Change	-2.9	2.6	3.2	1.2	0.8	1.4
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Nominal Personal Income (Mil \$)	6,086.2	6,432.8	6,758.4	7,028.8	7,353.3	7,782.7
% Change	0.4	5.7	5.1	4.0	4.6	5.8

Note: Source is UHERO. Figures for 2015 income are UHERO estimates. Figures for 2016 - 2018 are forecasts. Because of data disclosure rules, industry-level income is not available for all sectors.

TABLE 10: MAJOR ECONOMIC INDICATOR SUMMARY  
KAUAI COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Non-farm Jobs (Thou)	29.1	29.6	30.0	30.6	31.0	31.3
% Change	3.1	1.6	1.4	2.1	1.2	1.2
Total Population (Thou)	69.7	70.7	71.7	72.4	73.1	73.8
% Change	1.7	1.4	1.5	0.9	1.0	0.9
Total Personal Income (Mil \$)	2,670.3	2,830.5	2,956.9	3,079.3	3,233.7	3,417.5
% Change	2.7	6.0	4.5	4.1	5.0	5.7
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Real Personal Income (Mil 2015 \$)	2,736.0	2,858.8	2,956.9	3,035.3	3,114.8	3,193.0
% Change	0.9	4.5	3.4	2.7	2.6	2.5
Real Per Capita Income (Thou 2015 \$)	39.3	40.5	41.2	41.9	42.6	43.3
% Change	-0.8	3.1	1.9	1.7	1.6	1.6
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	1,114.4	1,117.7	1,166.0	1,190.4	1,213.9	1,238.7
% Change	2.7	0.3	4.3	2.1	2.0	2.0
U.S. Visitors	909.5	911.8	943.7	964.5	982.3	1,002.1
% Change	2.0	0.2	3.5	2.2	1.8	2.0
Japanese Visitors	29.4	23.8	25.2	25.1	25.8	27.7
% Change	5.5	-19.0	5.8	-0.4	2.8	7.1
Other Visitors	175.4	182.1	197.1	200.8	205.8	208.9
% Change	6.4	3.8	8.3	1.9	2.5	1.5
Avg. Length of Stay (Days)	7.6	7.7	7.6	7.6	7.6	7.6
Visitor Days (Thou Days)	8,496.9	8,590.5	8,907.6	9,062.2	9,204.3	9,361.0
% Change	4.0	1.1	3.7	1.7	1.6	1.7
Occupancy Rate (%)	69.2	70.1	71.4	72.4	73.0	72.2
Total Room Stock (Thou)	10.1	10.1	10.1	10.1	10.1	10.5
% Change	0.2	0.0	0.1	0.1	0.1	3.5

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 Income are UHERO estimates. Figures for 2013 - 2015 room stock are UHERO estimates. Figures for 2016 - 2018 are forecasts.



TABLE 11: JOBS BY DETAILED SECTOR (THOUSANDS)  
KAUAI COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Total Non-farm Jobs	29.1	29.6	30.0	30.6	31.0	31.3
% Change	3.1	1.6	1.4	2.1	1.2	1.2
Construction and Mining	1.3	1.3	1.5	1.7	1.8	1.8
% Change	2.5	-2.5	14.7	14.2	2.9	1.7
Manufacturing	0.4	0.4	0.4	0.4	0.4	0.4
% Change	19.4	11.6	0.0	0.1	0.4	3.6
Trade	4.4	4.4	4.4	4.5	4.5	4.6
% Change	2.9	1.5	0.2	0.7	1.0	1.3
Transportation and Utilities	1.4	1.5	1.5	1.5	1.5	1.5
% Change	2.5	6.1	2.9	1.2	1.6	0.9
Finance, Insurance and Real Estate	1.4	1.4	1.5	1.5	1.5	1.5
% Change	9.0	-0.6	4.2	-0.1	0.6	-0.2
Services	15.7	15.9	16.1	16.4	16.6	16.9
% Change	3.3	1.4	1.0	2.0	1.2	1.4
Health Care and Soc. Assistance	2.5	2.5	2.5	2.6	2.6	2.7
% Change	5.4	2.0	1.0	2.4	1.2	1.7
Accommodation and Food	8.0	8.1	8.2	8.3	8.4	8.6
% Change	4.1	1.4	0.8	2.1	1.2	1.4
Other	5.3	5.3	5.4	5.5	5.6	5.6
% Change	1.3	1.1	1.4	1.8	1.3	1.4
Government	4.5	4.6	4.6	4.6	4.7	4.7
% Change	0.0	2.2	-0.9	0.8	0.6	0.2
Federal Government	0.5	0.5	0.5	0.5	0.5	0.5
% Change	-3.1	-3.2	-1.6	1.1	0.7	0.4
State and Local Government	4.0	4.1	4.1	4.1	4.1	4.2
% Change	0.4	2.9	-0.8	0.7	0.6	0.1

Note: Source is UHERO. Figures for 2016 - 2018 are forecasts.

TABLE 12: PERSONAL INCOME BY DETAILED SECTOR  
KAUAI COUNTY FORECAST

	2013	2014	2015	2016	2017	2018
Real Personal Income (Mil 2015 \$ )	2,736.0	2,858.8	2,956.9	3,035.3	3,114.8	3,193.0
% Change	0.9	4.5	3.4	2.7	2.6	2.5
Labor & Proprietors' Income	1,819.1	1,881.6	1,944.2	2,004.8	2,051.1	2,097.0
% Change	2.8	3.4	3.3	3.1	2.3	2.2
Agriculture	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Construction and Mining	146.9	139.2	162.8	190.1	200.9	208.1
% Change	-4.9	-5.2	16.9	16.7	5.7	3.6
Manufacturing	15.5	17.5	17.7	18.0	18.0	18.6
% Change	16.9	12.4	1.6	1.3	0.1	3.2
Total Trade	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Transportation and Utilities	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Finance, Insurance & Real Estate	140.0	142.5	--	--	--	--
% Change	2.4	1.8	--	--	--	--
Services	794.3	815.8	841.5	863.6	877.5	895.6
% Change	2.7	2.7	3.1	2.6	1.6	2.1
Health Care and Soc. Assist. (% Ch)	4.0	2.3	1.1	3.3	2.6	2.3
Accommodation and Food (% Ch)	5.0	2.6	3.5	3.6	1.7	2.0
Other (% Ch)	-0.1	3.1	3.7	1.3	1.1	2.0
Government	378.3	390.9	390.3	397.2	402.8	408.7
% Change	0.8	3.3	-0.2	1.8	1.4	1.4
Federal Government (% Ch)	-4.8	2.4	2.4	1.4	1.5	1.3
State and Local Government (% Ch)	2.1	3.8	-0.6	2.0	1.5	1.6
Less Social Security Taxes (-)	226.2	223.2	227.1	230.6	234.0	238.4
% Change	17.6	-1.3	1.8	1.5	1.5	1.9
Transfer Payments	550.9	586.9	616.1	633.2	652.5	669.6
% Change	2.4	6.5	5.0	2.8	3.1	2.6
Dividends, Interest and Rent	588.9	610.1	623.8	627.8	645.5	664.9
% Change	-0.8	3.6	2.3	0.6	2.8	3.0
Total Population (Thou)	69.7	70.7	71.7	72.4	73.1	73.8
% Change	1.7	1.4	1.5	0.9	1.0	0.9
Real Per Capita Income (Thou 2015 \$ )	39.3	40.5	41.2	41.9	42.6	43.3
% Change	-0.8	3.1	1.9	1.7	1.6	1.6
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Nominal Personal Income (Mil \$)	2,670.3	2,830.5	2,956.9	3,079.3	3,233.7	3,417.5
% Change	2.7	6.0	4.5	4.1	5.0	5.7

Note: Source is UHERO. Figures for 2015 income are UHERO estimates. Figures for 2016 - 2018 are forecasts. Because of data disclosure rules, industry-level income is not available for all sectors.

TABLE 13: MAJOR ECONOMIC INDICATOR SUMMARY  
EXTENDED HONOLULU COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Non-farm Jobs (Thou)	468.4	475.2	479.2	481.7	483.6	485.1
% Change	1.3	1.5	0.8	0.5	0.4	0.3
Employment (Thou)	453.0	461.1	463.6	464.5	465.1	465.2
% Change	2.0	1.8	0.5	0.2	0.1	0.0
Unemployment Rate (%)	3.4	2.8	2.7	2.8	3.1	3.3
Total Population (Thou)	998.8	1,000.3	1,003.9	1,007.6	1,013.1	1,019.0
% Change	0.7	0.1	0.4	0.4	0.6	0.6
Total Personal Income (Mil \$)	51,549.4	53,232.9	55,345.1	57,712.3	59,738.5	61,432.4
% Change	4.5	3.3	4.0	4.3	3.5	2.8
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Real Personal Income (Mil 2015 \$)	51,549.4	52,471.8	53,310.3	53,921.0	54,509.0	55,112.3
% Change	3.5	1.8	1.6	1.1	1.1	1.1
Real Per Capita Income (Thou 2015 \$)	51.6	52.5	53.1	53.5	53.8	54.1
% Change	2.8	1.6	1.2	0.8	0.5	0.5
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	5,321.4	5,399.3	5,438.7	5,463.9	5,476.7	5,497.9
% Change	2.8	1.5	0.7	0.5	0.2	0.4
U.S. Visitors	2,592.6	2,659.8	2,679.8	2,683.4	2,684.2	2,681.5
% Change	3.3	2.6	0.8	0.1	0.0	-0.1
Japanese Visitors	1,454.1	1,434.3	1,445.7	1,454.9	1,455.3	1,466.1
% Change	-1.0	-1.4	0.8	0.6	0.0	0.7
Other Visitors	1,274.7	1,305.2	1,313.3	1,325.6	1,337.2	1,350.3
% Change	6.5	2.4	0.6	0.9	0.9	1.0
Avg. Length of Stay (Days)	6.8	6.8	6.9	6.9	6.9	6.9
Visitor Days (Thou Days)	36,340.5	36,757.8	37,317.0	37,691.3	37,932.8	38,107.0
% Change	3.7	1.1	1.5	1.0	0.6	0.5
Occupancy Rate (%)	85.4	86.1	84.7	83.0	82.1	82.1
Total Room Stock (Thou)	34.8	35.2	36.7	38.0	38.5	38.7
% Change	-2.1	1.2	4.0	3.5	1.4	0.6

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 room stock and income are UHERO estimates. Figures for 2016 - 2020 are forecasts.

TABLE 14: JOBS BY DETAILED SECTOR (THOUSANDS)  
EXTENDED HONOLULU COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Total Non-farm Jobs	468.4	475.2	479.2	481.7	483.6	485.1
% Change	1.3	1.5	0.8	0.5	0.4	0.3
Construction and Mining	25.8	28.2	28.7	28.7	28.4	27.9
% Change	7.7	9.5	1.7	-0.1	-1.0	-1.5
Manufacturing	11.2	11.1	11.1	11.2	11.3	11.3
% Change	1.0	-0.4	0.1	0.8	0.4	0.3
Trade	62.0	62.2	62.7	62.9	63.0	63.1
% Change	0.5	0.2	0.8	0.3	0.2	0.2
Transportation and Utilities	22.2	22.6	23.0	23.2	23.4	23.6
% Change	1.3	1.7	1.7	0.9	0.9	0.8
Finance, Insurance and Real Estate	21.1	21.3	21.5	21.5	21.5	21.5
% Change	1.6	0.7	0.9	0.2	0.1	-0.2
Services	227.1	230.6	232.6	234.3	235.9	237.3
% Change	1.3	1.5	0.9	0.7	0.7	0.6
Health Care and Soc. Assistance	52.0	53.3	54.0	54.7	55.5	56.2
% Change	3.1	2.6	1.2	1.4	1.4	1.3
Accommodation and Food	60.6	61.3	61.8	62.3	62.6	62.7
% Change	0.1	1.1	0.8	0.9	0.5	0.1
Other	114.6	116.0	116.9	117.2	117.8	118.4
% Change	1.2	1.3	0.7	0.3	0.5	0.5
Government	99.0	99.2	99.6	99.9	100.2	100.5
% Change	0.3	0.2	0.4	0.3	0.3	0.3
Federal Government	30.5	30.6	30.6	30.6	30.5	30.5
% Change	0.0	0.3	0.0	-0.2	-0.2	0.0
State and Local Government	68.5	68.6	69.0	69.3	69.7	70.0
% Change	0.4	0.2	0.6	0.5	0.5	0.4

Note: Source is UHERO. Figures for 2016 - 2020 are forecasts.

TABLE 15: PERSONAL INCOME BY DETAILED SECTOR  
EXTENDED HONOLULU COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Real Personal Income (Mil 2015 \$ )	51,549.4	52,471.8	53,310.3	53,921.0	54,509.0	55,112.3
% Change	3.5	1.8	1.6	1.1	1.1	1.1
Labor & Proprietors' Income	37,992.8	38,837.2	39,473.5	39,856.1	40,183.9	40,484.7
% Change	3.5	2.2	1.6	1.0	0.8	0.7
Agriculture	121.7	124.1	125.1	127.4	127.9	128.3
% Change	11.4	2.0	0.8	1.8	0.4	0.3
Construction and Mining	2,919.7	3,191.8	3,296.7	3,305.0	3,274.3	3,222.4
% Change	12.5	9.3	3.3	0.3	-0.9	-1.6
Manufacturing	728.1	737.3	741.9	747.7	751.0	754.4
% Change	2.4	1.3	0.6	0.8	0.4	0.5
Total Trade	3,042.8	3,081.4	3,103.3	3,128.8	3,155.7	3,180.9
% Change	1.4	1.3	0.7	0.8	0.9	0.8
Transportation and Utilities	1,874.0	1,911.7	1,958.7	1,988.1	2,017.3	2,043.8
% Change	4.4	2.0	2.5	1.5	1.5	1.3
Finance, Insurance & Real Estate	2,514.2	2,582.4	2,662.1	2,711.5	2,753.3	2,782.5
% Change	6.2	2.7	3.1	1.9	1.5	1.1
Services	14,031.4	14,426.6	14,733.3	14,968.4	15,154.2	15,294.5
% Change	3.4	2.8	2.1	1.6	1.2	0.9
Health Care and Soc. Assist. (% Ch)	4.9	4.1	2.5	2.3	2.0	1.6
Accommodation and Food (% Ch)	3.2	2.2	1.1	1.4	1.4	1.1
Other (% Ch)	2.8	2.4	2.2	1.3	0.8	0.5
Government	12,761.1	12,781.9	12,852.4	12,879.3	12,950.2	13,077.8
% Change	1.6	0.2	0.6	0.2	0.6	1.0
Federal Government (% Ch)	1.8	1.0	0.7	0.5	0.4	0.4
State and Local Government (% Ch)	3.4	0.3	1.4	0.6	0.4	0.5
Less Social Security Taxes (-)	4,312.5	4,362.9	4,444.6	4,492.5	4,529.5	4,563.4
% Change	1.6	1.2	1.9	1.1	0.8	0.7
Transfer Payments	7,341.6	7,418.2	7,577.6	7,753.9	7,940.6	8,135.7
% Change	2.9	1.0	2.1	2.3	2.4	2.5
Dividends, Interest and Rent	10,527.5	10,579.3	10,703.8	10,803.5	10,914.0	11,055.3
% Change	2.9	0.5	1.2	0.9	1.0	1.3
Total Population (Thou)	998.8	1,000.3	1,003.9	1,007.6	1,013.1	1,019.0
% Change	0.7	0.1	0.4	0.4	0.6	0.6
Real Per Capita Income (Thou 2015 \$ )	51.6	52.5	53.1	53.5	53.8	54.1
% Change	2.8	1.6	1.2	0.8	0.5	0.5
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Nominal Personal Income (Mil \$)	51,549.4	53,232.9	55,345.1	57,712.3	59,738.5	61,432.4
% Change	4.5	3.3	4.0	4.3	3.5	2.8

Note: Source is UHERO. Figures for 2015 are UHERO estimates. Figures for 2016 - 2020 are forecasts.

TABLE 16: MAJOR ECONOMIC INDICATOR SUMMARY  
EXTENDED HAWAII COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Non-farm Jobs (Thou)	65.5	67.2	68.1	68.8	69.4	69.9
% Change	2.2	2.6	1.4	1.0	0.9	0.7
Total Population (Thou)	196.4	199.5	202.5	205.4	208.1	210.6
% Change	1.2	1.6	1.5	1.4	1.3	1.2
Total Personal Income (Mil \$)	7,107.0	7,434.1	7,828.3	8,275.3	8,669.8	9,003.5
% Change	5.0	4.6	5.3	5.7	4.8	3.8
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Real Personal Income (Mil 2015 \$)	7,107.0	7,327.8	7,540.5	7,731.6	7,910.9	8,077.2
% Change	3.9	3.1	2.9	2.5	2.3	2.1
Real Per Capita Income (Thou 2015 \$)	36.2	36.7	37.2	37.7	38.0	38.3
% Change	2.6	1.5	1.4	1.1	1.0	0.9
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	1,503.5	1,549.5	1,587.5	1,603.3	1,617.2	1,630.0
% Change	3.8	3.1	2.5	1.0	0.9	0.8
U.S. Visitors	1,027.2	1,071.1	1,088.6	1,094.2	1,099.8	1,103.9
% Change	5.7	4.3	1.6	0.5	0.5	0.4
Japanese Visitors	141.8	141.5	147.5	151.3	154.5	158.0
% Change	-16.8	-0.2	4.2	2.6	2.1	2.2
Other Visitors	334.5	336.9	351.4	357.8	362.9	368.1
% Change	9.1	0.7	4.3	1.8	1.4	1.4
Avg. Length of Stay (Days)	7.5	7.7	7.7	7.6	7.6	7.6
Visitor Days (Thou Days)	11,330.5	11,893.5	12,151.9	12,249.7	12,335.9	12,400.0
% Change	3.7	5.0	2.2	0.8	0.7	0.5
Occupancy Rate (%)	67.0	67.0	67.3	67.1	67.4	67.5
Total Room Stock (Thou)	11.5	11.6	11.6	11.7	11.7	11.8
% Change	1.3	0.6	0.4	0.4	0.5	0.6

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 room stock and income are UHERO estimates. Figures for 2016 - 2020 are forecasts.



TABLE 17: JOBS BY DETAILED SECTOR (THOUSANDS)  
EXTENDED HAWAII COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Total Non-farm Jobs	65.5	67.2	68.1	68.8	69.4	69.9
% Change	2.2	2.6	1.4	1.0	0.9	0.7
Construction and Mining	3.9	4.3	4.4	4.5	4.5	4.3
% Change	11.1	9.1	3.2	1.7	-0.7	-3.7
Manufacturing	1.2	1.2	1.2	1.2	1.2	1.2
% Change	-7.2	3.5	0.3	-0.5	-0.2	0.8
Trade	10.7	10.9	11.0	11.1	11.2	11.3
% Change	0.2	1.8	1.0	0.9	0.7	0.7
Transportation and Utilities	3.1	3.2	3.2	3.3	3.3	3.3
% Change	5.9	1.3	2.0	1.3	0.7	0.7
Finance, Insurance and Real Estate	2.7	2.7	2.7	2.7	2.7	2.7
% Change	1.0	0.2	1.0	0.2	0.1	0.0
Services	30.7	31.7	32.1	32.5	32.9	33.4
% Change	2.2	3.2	1.4	1.3	1.3	1.4
Health Care and Soc. Assistance	7.1	7.4	7.5	7.7	7.9	8.0
% Change	3.2	4.4	1.8	2.2	2.1	1.9
Accommodation and Food	12.4	12.8	12.9	12.9	13.0	13.1
% Change	6.2	3.4	0.7	0.2	0.4	0.6
Other	11.2	11.4	11.6	11.9	12.1	12.3
% Change	-2.3	2.1	1.8	1.9	1.9	1.8
Government	13.2	13.3	13.5	13.6	13.6	13.7
% Change	1.5	0.7	1.1	0.7	0.5	0.6
Federal Government	1.3	1.3	1.3	1.3	1.3	1.4
% Change	-3.0	0.1	0.7	0.3	0.3	0.6
State and Local Government	11.9	12.0	12.1	12.2	12.3	12.4
% Change	2.1	0.8	1.1	0.7	0.6	0.6

Note: Source is UHERO. Figures for 2016 - 2020 are forecasts.

TABLE 18: PERSONAL INCOME BY DETAILED SECTOR  
EXTENDED HAWAII COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Real Personal Income (Mil 2015 \$ )	7,107.0	7,327.8	7,540.5	7,731.6	7,910.9	8,077.2
% Change	3.9	3.1	2.9	2.5	2.3	2.1
Labor & Proprietors' Income	4,263.8	4,415.6	4,524.2	4,618.3	4,691.6	4,746.0
% Change	4.1	3.6	2.5	2.1	1.6	1.2
Agriculture	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Construction and Mining	389.3	434.1	460.1	476.1	477.6	462.5
% Change	13.3	11.5	6.0	3.5	0.3	-3.2
Manufacturing	66.9	70.1	70.0	69.4	69.4	70.4
% Change	-5.8	4.8	-0.1	-0.8	0.0	1.4
Total Trade	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Transportation and Utilities	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Finance, Insurance & Real Estate	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Services	1,698.1	1,760.4	1,793.1	1,828.9	1,864.6	1,903.1
% Change	3.7	3.7	1.9	2.0	2.0	2.1
Health Care and Soc. Assist. (% Ch)	3.2	5.4	3.1	2.8	2.7	2.8
Accommodation and Food (% Ch)	9.1	4.9	1.2	0.8	1.5	1.8
Other (% Ch)	-0.1	1.6	1.6	2.5	1.8	1.9
Government	1,035.8	1,053.8	1,073.9	1,095.0	1,113.0	1,123.9
% Change	1.9	1.7	1.9	2.0	1.6	1.0
Federal Government (% Ch)	0.9	0.3	1.4	1.2	1.2	1.2
State and Local Government (% Ch)	2.2	2.1	2.1	2.1	1.7	0.9
Less Social Security Taxes (-)	497.5	507.2	515.6	524.4	532.7	538.9
% Change	2.5	2.0	1.7	1.7	1.6	1.2
Transfer Payments	1,811.7	1,873.3	1,940.2	2,000.8	2,065.2	2,133.1
% Change	4.7	3.4	3.6	3.1	3.2	3.3
Dividends, Interest and Rent	1,529.2	1,545.6	1,591.5	1,636.8	1,686.5	1,737.0
% Change	3.0	1.1	3.0	2.8	3.0	3.0
Total Population (Thou)	196.4	199.5	202.5	205.4	208.1	210.6
% Change	1.2	1.6	1.5	1.4	1.3	1.2
Real Per Capita Income (Thou 2015 \$ )	36.2	36.7	37.2	37.7	38.0	38.3
% Change	2.6	1.5	1.4	1.1	1.0	0.9
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Nominal Personal Income (Mil \$)	7,107.0	7,434.1	7,828.3	8,275.3	8,669.8	9,003.5
% Change	5.0	4.6	5.3	5.7	4.8	3.8

Note: Source is UHERO. Figures for 2015 are UHERO estimates. Figures for 2016 - 2020 are forecasts. Because of data disclosure rules, industry-level income is not available for all sectors.

TABLE 19: MAJOR ECONOMIC INDICATOR SUMMARY  
EXTENDED MAUI COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Non-farm Jobs (Thou)	73.1	74.6	75.6	76.6	77.3	77.8
% Change	2.4	2.0	1.4	1.4	0.9	0.6
Total Population (Thou)	164.6	166.8	169.1	171.3	173.3	175.3
% Change	0.8	1.3	1.4	1.3	1.2	1.1
Total Personal Income (Mil \$)	6,758.4	7,028.8	7,353.3	7,782.7	8,143.5	8,433.2
% Change	5.1	4.0	4.6	5.8	4.6	3.6
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Real Personal Income (Mil 2015 \$)	6,758.4	6,928.3	7,082.9	7,271.5	7,430.7	7,565.6
% Change	4.0	2.5	2.2	2.7	2.2	1.8
Real Per Capita Income (Thou 2015 \$)	41.1	41.5	41.9	42.5	42.9	43.2
% Change	3.2	1.2	0.8	1.4	1.0	0.7
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	2,566.1	2,614.6	2,648.8	2,689.3	2,715.7	2,726.5
% Change	4.8	1.9	1.3	1.5	1.0	0.4
U.S. Visitors	1,942.4	1,981.2	2,002.9	2,032.3	2,053.1	2,061.5
% Change	6.1	2.0	1.1	1.5	1.0	0.4
Japanese Visitors	61.3	60.5	58.7	57.4	56.1	55.2
% Change	0.9	-1.3	-3.0	-2.2	-2.2	-1.6
Other Visitors	562.5	572.9	587.2	599.6	606.5	609.7
% Change	0.6	1.9	2.5	2.1	1.1	0.5
Avg. Length of Stay (Days)	8.3	8.3	8.2	8.2	8.2	8.2
Visitor Days (Thou Days)	21,170.7	21,625.9	21,846.0	22,118.0	22,307.2	22,373.6
% Change	4.4	2.2	1.0	1.2	0.9	0.3
Occupancy Rate (%)	74.4	75.9	76.4	76.2	75.9	75.6
Total Room Stock (Thou)	22.6	22.7	23.1	23.5	23.8	24.0
% Change	0.5	0.4	1.7	1.9	1.2	0.7

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 room stock and income are UHERO estimates. Figures for 2016 - 2020 are forecasts.

TABLE 20: JOBS BY DETAILED SECTOR (THOUSANDS)  
EXTENDED MAUI COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Total Non-farm Jobs	73.1	74.6	75.6	76.6	77.3	77.8
% Change	2.4	2.0	1.4	1.4	0.9	0.6
Construction and Mining	3.7	4.0	4.1	4.2	4.1	3.9
% Change	10.2	8.8	2.8	1.1	-1.6	-3.8
Manufacturing	1.2	1.2	1.1	1.0	1.1	1.1
% Change	0.0	-3.2	-9.3	-1.0	0.7	0.9
Trade	11.2	11.4	11.5	11.6	11.7	11.8
% Change	3.9	1.5	0.8	1.5	0.8	0.6
Transportation and Utilities	4.0	4.0	4.1	4.1	4.2	4.2
% Change	6.5	1.1	1.9	1.2	0.7	0.6
Finance, Insurance and Real Estate	2.9	2.9	2.9	2.9	2.9	2.9
% Change	4.5	0.8	0.9	0.1	0.1	0.0
Services	40.4	41.3	42.0	42.8	43.3	43.8
% Change	1.5	2.2	1.8	1.8	1.3	1.1
Health Care and Soc. Assistance	5.4	5.7	5.8	5.9	6.0	6.1
% Change	5.0	4.2	1.6	2.1	2.0	1.8
Accommodation and Food	21.3	21.8	22.2	22.6	22.8	22.9
% Change	1.1	2.1	1.8	1.7	0.9	0.5
Other	13.6	13.8	14.1	14.3	14.5	14.8
% Change	1.0	1.4	1.7	1.7	1.7	1.7
Government	9.8	9.8	9.9	10.0	10.0	10.1
% Change	-0.5	0.6	1.0	0.6	0.4	0.5
Federal Government	0.8	0.8	0.8	0.8	0.8	0.8
% Change	0.0	0.1	0.7	0.4	0.4	0.6
State and Local Government	9.0	9.0	9.1	9.2	9.2	9.3
% Change	-0.6	0.6	1.0	0.6	0.4	0.4

Note: Source is UHERO. Figures for 2016 - 2020 are forecasts.

TABLE 21: PERSONAL INCOME BY DETAILED SECTOR  
EXTENDED MAUI COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Real Personal Income (Mil 2015 \$ )	6,758.4	6,928.3	7,082.9	7,271.5	7,430.7	7,565.6
% Change	4.0	2.5	2.2	2.7	2.2	1.8
Labor & Proprietors' Income	4,717.6	4,851.8	4,938.3	5,055.1	5,137.6	5,192.3
% Change	4.3	2.8	1.8	2.4	1.6	1.1
Agriculture	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Construction and Mining	400.7	445.7	470.5	484.1	481.0	465.2
% Change	12.4	11.2	5.6	2.9	-0.6	-3.3
Manufacturing	68.9	67.4	61.0	60.1	60.7	61.6
% Change	1.6	-2.1	-9.6	-1.4	1.0	1.4
Total Trade	504.2	510.0	517.9	528.1	537.4	545.9
% Change	3.9	1.2	1.6	2.0	1.8	1.6
Transportation and Utilities	265.6	269.4	274.1	279.5	282.6	285.6
% Change	8.4	1.4	1.7	2.0	1.1	1.1
Finance, Insurance & Real Estate	279.7	284.9	301.6	314.7	324.0	330.2
% Change	4.8	1.9	5.8	4.3	3.0	1.9
Services	2,274.2	2,338.8	2,388.2	2,445.5	2,493.5	2,539.5
% Change	3.8	2.8	2.1	2.4	2.0	1.8
Health Care and Soc. Assist. (% Ch)	5.1	5.2	3.0	2.7	2.6	2.6
Accommodation and Food (% Ch)	3.8	3.6	2.3	2.4	2.0	1.7
Other (% Ch)	3.3	0.9	1.4	2.3	1.7	1.7
Government	808.9	821.9	836.6	852.3	865.5	873.1
% Change	0.1	1.6	1.8	1.9	1.6	0.9
Federal Government (% Ch)	4.1	0.4	1.4	1.3	1.2	1.2
State and Local Government (% Ch)	-0.4	1.9	1.9	2.0	1.6	0.8
Less Social Security Taxes (-)	541.3	548.1	553.5	564.5	573.7	579.8
% Change	2.7	1.2	1.0	2.0	1.6	1.1
Transfer Payments	1,168.1	1,205.2	1,246.6	1,283.8	1,323.5	1,365.3
% Change	4.2	3.2	3.4	3.0	3.1	3.2
Dividends, Interest and Rent	1,414.3	1,419.6	1,452.1	1,497.6	1,543.8	1,588.5
% Change	3.2	0.4	2.3	3.1	3.1	2.9
Total Population (Thou)	164.6	166.8	169.1	171.3	173.3	175.3
% Change	0.8	1.3	1.4	1.3	1.2	1.1
Real Per Capita Income (Thou 2015 \$ )	41.1	41.5	41.9	42.5	42.9	43.2
% Change	3.2	1.2	0.8	1.4	1.0	0.7
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Nominal Personal Income (Mil \$)	6,758.4	7,028.8	7,353.3	7,782.7	8,143.5	8,433.2
% Change	5.1	4.0	4.6	5.8	4.6	3.6

Note: Source is UHERO. Figures for 2015 are UHERO estimates. Figures for 2016 - 2020 are forecasts. Because of data disclosure rules, industry-level income is not available for all sectors.

TABLE 22: MAJOR ECONOMIC INDICATOR SUMMARY  
EXTENDED KAUAI COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Non-farm Jobs (Thou)	30.0	30.6	31.0	31.3	31.6	31.8
% Change	1.4	2.1	1.2	1.2	1.0	0.6
Total Population (Thou)	71.7	72.4	73.1	73.8	74.4	75.0
% Change	1.5	0.9	1.0	0.9	0.8	0.8
Total Personal Income (Mil \$)	2,956.9	3,079.3	3,233.7	3,417.5	3,577.6	3,706.1
% Change	4.5	4.1	5.0	5.7	4.7	3.6
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Real Personal Income (Mil 2015 \$)	2,956.9	3,035.3	3,114.8	3,193.0	3,264.4	3,324.8
% Change	3.4	2.7	2.6	2.5	2.2	1.9
Real Per Capita Income (Thou 2015 \$)	41.2	41.9	42.6	43.3	43.9	44.3
% Change	1.9	1.7	1.6	1.6	1.4	1.1
TOURISM SECTOR DETAIL						
Total Visitors (Thou)	1,166.0	1,190.4	1,213.9	1,238.7	1,259.8	1,272.3
% Change	4.3	2.1	2.0	2.0	1.7	1.0
U.S. Visitors	943.7	964.5	982.3	1,002.1	1,019.9	1,029.0
% Change	3.5	2.2	1.8	2.0	1.8	0.9
Japanese Visitors	25.2	25.1	25.8	27.7	28.8	29.6
% Change	5.8	-0.4	2.8	7.1	4.0	2.9
Other Visitors	197.1	200.8	205.8	208.9	211.1	213.6
% Change	8.3	1.9	2.5	1.5	1.1	1.2
Avg. Length of Stay (Days)	7.6	7.6	7.6	7.6	7.6	7.6
Visitor Days (Thou Days)	8,907.6	9,062.2	9,204.3	9,361.0	9,524.8	9,631.2
% Change	3.7	1.7	1.6	1.7	1.8	1.1
Occupancy Rate (%)	71.4	72.4	73.0	72.2	72.4	72.8
Total Room Stock (Thou)	10.1	10.1	10.1	10.5	10.5	10.5
% Change	0.1	0.1	0.1	3.5	0.3	0.4

Note: Source is UHERO. Historical figures for occupancy rate are from Hospitality Advisors LLC. Figures for 2015 room stock and income are UHERO estimates. Figures for 2016 - 2020 are forecasts.



TABLE 23: JOBS BY DETAILED SECTOR (THOUSANDS)  
EXTENDED KAUAI COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Total Non-farm Jobs	30.0	30.6	31.0	31.3	31.6	31.8
% Change	1.4	2.1	1.2	1.2	1.0	0.6
Construction and Mining	1.5	1.7	1.8	1.8	1.8	1.7
% Change	14.7	14.2	2.9	1.7	0.3	-4.1
Manufacturing	0.4	0.4	0.4	0.4	0.4	0.4
% Change	0.0	0.1	0.4	3.6	4.5	1.3
Trade	4.4	4.5	4.5	4.6	4.7	4.7
% Change	0.2	0.7	1.0	1.3	1.7	1.3
Transportation and Utilities	1.5	1.5	1.5	1.5	1.6	1.6
% Change	2.9	1.2	1.6	0.9	0.4	0.4
Finance, Insurance and Real Estate	1.5	1.5	1.5	1.5	1.5	1.5
% Change	4.2	-0.1	0.6	-0.2	-0.3	-0.4
Services	16.1	16.4	16.6	16.9	17.1	17.3
% Change	1.0	2.0	1.2	1.4	1.2	1.2
Health Care and Soc. Assistance	2.5	2.6	2.6	2.7	2.7	2.7
% Change	1.0	2.4	1.2	1.7	1.6	1.4
Accommodation and Food	8.2	8.3	8.4	8.6	8.6	8.7
% Change	0.8	2.1	1.2	1.4	1.0	1.0
Other	5.4	5.5	5.6	5.6	5.7	5.8
% Change	1.4	1.8	1.3	1.4	1.4	1.3
Government	4.6	4.6	4.7	4.7	4.7	4.7
% Change	-0.9	0.8	0.6	0.2	0.1	0.1
Federal Government	0.5	0.5	0.5	0.5	0.5	0.5
% Change	-1.6	1.1	0.7	0.4	0.4	0.7
State and Local Government	4.1	4.1	4.1	4.2	4.2	4.2
% Change	-0.8	0.7	0.6	0.1	0.1	0.1

Note: Source is UHERO. Figures for 2016 - 2020 are forecasts.

TABLE 24: PERSONAL INCOME BY DETAILED SECTOR  
EXTENDED KAUAI COUNTY FORECAST

	2015	2016	2017	2018	2019	2020
Real Personal Income (Mil 2015 \$ )	2,956.9	3,035.3	3,114.8	3,193.0	3,264.4	3,324.8
% Change	3.4	2.7	2.6	2.5	2.2	1.9
Labor & Proprietors' Income	1,944.2	2,004.8	2,051.1	2,097.0	2,133.1	2,156.8
% Change	3.3	3.1	2.3	2.2	1.7	1.1
Agriculture	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Construction and Mining	162.8	190.1	200.9	208.1	210.7	203.2
% Change	16.9	16.7	5.7	3.6	1.2	-3.6
Manufacturing	17.7	18.0	18.0	18.6	19.5	19.8
% Change	1.6	1.3	0.1	3.2	4.8	1.9
Total Trade	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Transportation and Utilities	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Finance, Insurance & Real Estate	--	--	--	--	--	--
% Change	--	--	--	--	--	--
Services	841.5	863.6	877.5	895.6	911.7	929.2
% Change	3.1	2.6	1.6	2.1	1.8	1.9
Health Care and Soc. Assist. (% Ch)	1.1	3.3	2.6	2.3	2.2	2.2
Accommodation and Food (% Ch)	3.5	3.6	1.7	2.0	2.1	2.3
Other (% Ch)	3.7	1.3	1.1	2.0	1.3	1.4
Government	390.3	397.2	402.8	408.7	413.7	416.5
% Change	-0.2	1.8	1.4	1.4	1.2	0.7
Federal Government (% Ch)	2.4	1.4	1.5	1.3	1.2	1.3
State and Local Government (% Ch)	-0.6	2.0	1.5	1.6	1.2	0.4
Less Social Security Taxes (-)	227.1	230.6	234.0	238.4	242.5	245.2
% Change	1.8	1.5	1.5	1.9	1.7	1.1
Transfer Payments	616.1	633.2	652.5	669.6	687.9	707.2
% Change	5.0	2.8	3.1	2.6	2.7	2.8
Dividends, Interest and Rent	623.8	627.8	645.5	664.9	686.0	706.2
% Change	2.3	0.6	2.8	3.0	3.2	2.9
Total Population (Thou)	71.7	72.4	73.1	73.8	74.4	75.0
% Change	1.5	0.9	1.0	0.9	0.8	0.8
Real Per Capita Income (Thou 2015 \$ )	41.2	41.9	42.6	43.3	43.9	44.3
% Change	1.9	1.7	1.6	1.6	1.4	1.1
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Nominal Personal Income (Mil \$)	2,956.9	3,079.3	3,233.7	3,417.5	3,577.6	3,706.1
% Change	4.5	4.1	5.0	5.7	4.7	3.6

Note: Source is UHERO. Figures for 2015 are UHERO estimates. Figures for 2016 - 2020 are forecasts. Because of data disclosure rules, industry-level income is not available for all sectors.

TABLE 25: MAJOR ECONOMIC INDICATORS  
STATE OF HAWAII FORECAST

	2013	2014	2015	2016	2017	2018
Non-farm Payrolls (Thou)	618.6	627.2	636.9	647.6	653.9	658.4
% Change	2.0	1.4	1.5	1.7	1.0	0.7
Employment (Thou)	619.1	639.1	652.9	665.3	669.6	674.2
% Change	1.7	3.2	2.2	1.9	0.6	0.7
Unemployment Rate (%)	4.9	4.4	3.6	3.0	2.9	3.0
Population (Thou)	1,408.8	1,420.3	1,431.6	1,439.0	1,448.7	1,458.0
% Change	1.2	0.8	0.8	0.5	0.7	0.6
Personal Income (Mil\$)	62,437.3	65,348.0	68,373.4	70,775.1	73,760.3	77,187.8
% Change	0.7	4.7	4.6	3.5	4.2	4.6
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Real Personal Income (Mil 2015\$)	63,971.9	66,001.3	68,373.4	69,763.2	71,048.5	72,117.0
% Change	-1.0	3.2	3.6	2.0	1.8	1.5
Real Per Capita Income (Thou 2015\$)	45.4	46.5	47.8	48.5	49.0	49.5
% Change	-2.2	2.3	2.8	1.5	1.2	0.9
Real GDP (Mil 2015\$)	75,978.6	76,932.6	79,895.1	82,214.9	84,062.2	85,319.2
% Change	0.8	1.3	3.9	2.9	2.2	1.5
<b>TOURISM SECTOR DETAIL</b>						
Total Visitor Arrivals by Air (Thou)	8,003.5	8,183.7	8,534.0	8,671.8	8,766.6	8,836.8
% Change - Total Visitor Arrivals by Air	1.7	2.3	4.3	1.6	1.1	0.8
U.S. Visitors	4,913.3	5,021.5	5,307.0	5,414.8	5,477.6	5,508.2
% Change - U.S. Visitors	0.7	2.2	5.7	2.0	1.2	0.6
Japanese Visitors	1,518.5	1,511.7	1,499.2	1,479.9	1,496.0	1,513.3
% Change - Japanese Visitors	3.6	-0.4	-0.8	-1.3	1.1	1.2
Other Visitors	1,571.7	1,650.5	1,727.8	1,777.1	1,793.0	1,815.3
% Change - Other Visitors	3.2	5.0	4.7	2.9	0.9	1.2
Avg. Length of Stay (Days)	9.3	9.2	9.1	9.1	9.2	9.2
Visitor Days (Thou)	74,049.8	74,982.9	77,727.8	79,339.4	80,519.2	81,420.0
% Change	0.5	1.3	3.7	2.1	1.5	1.1
Average Daily Room Rate (\$)	229.5	235.0	243.3	249.5	254.8	263.3
% Change	12.2	2.4	3.5	2.6	2.1	3.3
Occupancy Rate (%)	76.6	77.1	79.0	78.2	78.0	77.1
Real Visitor Expenditures (Mil 2015\$)	14,705.2	14,926.2	15,118.9	15,077.5	14,955.9	14,898.1
% Change	-0.6	1.5	1.3	-0.3	-0.8	-0.4

Note: Source is UHERO. Historical figures for occupancy rate and daily room rate are from Hospitality Advisors LLC. Figures for GDP for 2015 is a UHERO estimate. Figures for 2016-2018 are forecasts.

TABLE 26: JOBS BY INDUSTRY  
STATE OF HAWAII FORECAST

	2013	2014	2015	2016	2017	2018
Non-farm Payrolls (Thou)	618.6	627.2	636.9	647.6	653.9	658.4
% Change	2.0	1.4	1.5	1.7	1.0	0.7
Construction and Mining	31.0	32.1	34.9	38.3	39.0	39.1
% Change	5.5	3.5	8.6	9.7	2.0	0.3
Manufacturing	13.6	13.9	14.0	13.9	13.8	13.9
% Change	1.8	2.1	0.9	-0.6	-0.6	0.6
Trade	87.4	87.6	88.3	88.9	89.6	90.2
% Change	1.0	0.2	0.8	0.7	0.8	0.6
Transportation and Utilities	29.5	30.1	30.8	31.3	31.8	32.1
% Change	4.2	2.0	2.3	1.5	1.7	1.0
Finance, Insurance and Real Estate	27.2	27.6	28.1	28.3	28.5	28.6
% Change	1.6	1.7	1.8	0.7	0.9	0.2
Services	305.5	309.7	314.3	320.0	323.4	326.4
% Change	3.0	1.4	1.5	1.8	1.1	0.9
Health Care and Soc. Assistance	64.1	64.9	67.1	69.0	69.9	71.0
% Change	3.0	1.4	3.3	2.9	1.3	1.5
Accommodation and Food	99.3	101.3	102.5	104.2	105.3	106.4
% Change	3.2	2.0	1.3	1.7	1.1	1.0
Other	142.1	143.5	144.7	146.8	148.1	149.0
% Change	2.9	1.0	0.8	1.4	0.9	0.6
Government	124.5	126.3	126.6	127.0	127.7	128.1
% Change	-0.9	1.4	0.3	0.3	0.5	0.4
Federal Government	33.9	33.2	33.2	33.3	33.3	33.2
% Change	-3.0	-2.1	0.0	0.2	0.1	-0.1
State and Local Government	90.6	93.1	93.4	93.7	94.4	94.9
% Change	0.0	2.7	0.3	0.4	0.7	0.5

Note: Source is UHERO. Figures for 2016-2018 are forecasts.

TABLE 27: PERSONAL INCOME BY INDUSTRY  
STATE OF HAWAII FORECAST

	2013	2014	2015	2016	2017	2018
Real Personal Income (Mil 2015\$)	63,971.9	66,001.3	68,373.4	69,763.2	71,048.5	72,117.0
% Change	-1.0	3.2	3.6	2.0	1.8	1.5
Labor & Proprietors' Income	46,194.1	47,211.1	48,920.0	50,109.5	50,987.1	51,626.5
% Change	0.2	2.2	3.6	2.4	1.8	1.3
Construction	3,296.1	3,443.5	3,885.0	4,273.9	4,441.2	4,486.7
% Change	2.2	4.5	12.8	10.0	3.9	1.0
Manufacturing	839.5	867.1	887.7	896.1	894.4	899.5
% Change	0.8	3.3	2.4	0.9	-0.2	0.6
Trade	4,090.2	4,124.7	4,188.2	4,239.6	4,280.5	4,326.3
% Change	1.6	0.8	1.5	1.2	1.0	1.1
Transportation and Utilities	2,301.8	2,364.4	2,482.7	2,530.9	2,588.5	2,630.2
% Change	6.5	2.7	5.0	1.9	2.3	1.6
Finance, Insurance & Real Estate	3,041.2	3,031.4	3,195.1	3,277.7	3,397.8	3,479.1
% Change	-6.4	-0.3	5.4	2.6	3.7	2.4
Services	17,799.9	18,233.2	18,861.4	19,412.6	19,814.9	20,161.5
% Change	2.2	2.4	3.4	2.9	2.1	1.7
Health Care & Soc. Assist. (% ch.)	2.4	1.9	4.6	4.3	2.6	2.4
Accommodation & Food (% ch.)	4.0	3.2	4.3	3.0	1.5	1.6
Other (% ch.)	1.3	2.3	2.5	2.2	2.1	1.5
Government	14,481.8	14,773.6	14,995.1	15,059.3	15,170.4	15,239.9
% Change	-2.5	2.0	1.5	0.4	0.7	0.5
Federal, civilian (% ch.)	-6.1	1.4	1.8	1.1	0.8	0.6
State & Local (% ch.)	1.3	4.5	2.6	0.8	1.6	1.0
Less Social Security Taxes (-)	5,541.8	5,478.6	5,578.7	5,650.0	5,749.0	5,821.1
% Change	14.4	-1.1	1.8	1.3	1.8	1.3
Transfer Payments	10,080.9	10,571.6	10,936.4	11,128.5	11,415.2	11,706.2
% Change	1.6	4.9	3.5	1.8	2.6	2.5
Dividends, Interest and Rent	13,238.7	13,697.2	14,095.7	14,175.2	14,395.2	14,605.4
% Change	-1.7	3.5	2.9	0.6	1.6	1.5
Population (Thou)	1,408.8	1,420.3	1,431.6	1,439.0	1,448.7	1,458.0
% Change	1.2	0.8	0.8	0.5	0.7	0.6
Real Per Capita Income (Thou 2015\$)	45.4	46.5	47.8	48.5	49.0	49.5
% Change	-2.2	2.3	2.8	1.5	1.2	0.9
Inflation Rate, Honolulu MSA (%)	1.8	1.4	1.0	1.5	2.3	3.1
Nominal Personal Income (Mil. \$)	62,437.3	65,348.0	68,373.4	70,775.1	73,760.3	77,187.8
% Change	0.7	4.7	4.6	3.5	4.2	4.6

Note: Source is UHERO. Figures for 2016-2018 are forecasts.

TABLE 28: CONSTRUCTION INDICATORS  
STATE OF HAWAII FORECAST

	2013	2014	2015	2016	2017	2018
<b>BUILDING PERMITS (Mil 2015\$)</b>						
Total Commitments to Build	4,391	4,639	5,518	5,781	5,889	5,875
% Change	9.1	5.6	19.0	4.8	1.9	-0.2
Real Private Building Permits	3,052	3,486	3,964	4,316	4,516	4,407
% Change	-2.1	14.2	13.7	8.9	4.6	-2.4
Real Residential Building Permits	1,150	1,037	1,651	1,749	1,838	1,859
% Change	16.5	-9.8	59.3	5.9	5.1	1.1
Real Non-Residential Building Permits	1,902	2,449	2,312	2,567	2,677	2,548
% Change	-10.7	28.8	-5.6	11.0	4.3	-4.8
Government Contracts Awarded	1,340	1,153	1,555	1,466	1,373	1,468
% Change	47.1	-13.9	34.8	-5.7	-6.3	7.0
<b>CONSTRUCTION ACTIVITY</b>						
Real GE Contracting Tax Base (Mil 2015\$)	8,223	7,385	8,105	9,058	9,556	9,723
% Change	-0.4	-10.2	9.7	11.8	5.5	1.8
Nominal GE Contracting Tax Base (Mil \$)	7,330	7,024	8,105	9,704	10,915	11,720
% Change	4.6	-4.2	15.4	19.7	12.5	7.4
Construction Job Count (Thou)	31.0	32.1	34.9	38.3	39.0	39.1
% Change	5.5	3.5	8.6	9.7	2.0	0.3
Real Construction Income (Mil 2015\$)	3,296	3,444	3,885	4,274	4,441	4,487
% Change	2.2	4.5	12.8	10.0	3.9	1.0
<b>PRICES &amp; COSTS (HONOLULU)</b>						
Honolulu Median Home Price (Thou \$)	647.0	675.6	697.5	731.3	766.6	793.1
% Change	3.5	4.4	3.2	4.8	4.8	3.5
Honolulu Median Condominium Price (Thou \$)	333.6	350.4	362.1	387.4	412.0	432.2
% Change	5.6	5.0	3.3	7.0	6.4	4.9
Honolulu Housing Affordability Index	87.5	78.4	83.0	79.6	74.8	72.3
% Change	-3.1	-10.4	5.9	-4.1	-6.0	-3.3
Honolulu Construction Cost Index (2015=100)	89.1	95.1	100.0	107.1	114.2	120.5
% Change	5.1	6.7	5.1	7.1	6.6	5.5
30-Year Mortgage Rate (%)	4.0	4.2	3.9	4.2	4.7	5.1

Note: Source is UHERO. Figures for 2016-2018 are forecasts. Commitments to Build are the sum of private permits and public contracts awarded. Permits and tax base are deflated by Honolulu Construction Co. Income is deflated by Honolulu CPI. Housing affordability index is the ratio of median family income to qualifying income for a for the median-priced home (times 100).



TABLE 29: EXTERNAL INDICATORS  
STATE OF HAWAII FORECAST

	2013	2014	2015	2016	2017	2018
<b>U.S. FACTORS</b>						
Employment (Thou)	143,929.3	146,305.3	148,833.4	150,846.7	152,122.9	152,760.4
% Change	1.0	1.7	1.7	1.4	0.8	0.4
Unemployment Rate (%)	7.4	6.2	5.3	4.7	4.6	4.8
Inflation Rate (%)	1.5	1.6	0.1	1.3	1.6	1.8
Real GDP (Bil 2009\$)	15,583.3	15,961.7	16,345.0	16,682.8	17,028.9	17,356.8
% Change	1.5	2.4	2.4	2.1	2.1	1.9
Population (Thou)	316,839.0	319,173.0	321,368.9	323,995.5	326,625.8	329,256.5
% Change	0.7	0.7	0.7	0.8	0.8	0.8
<b>JAPAN FACTORS</b>						
Employment (Thou)	63,110.8	63,505.0	63,759.2	63,808.4	63,575.1	63,280.6
% Change	0.7	0.6	0.4	0.1	-0.4	-0.5
Unemployment Rate (%)	4.0	3.6	3.4	3.2	3.3	3.5
Inflation Rate (%)	0.4	2.7	0.8	0.1	0.4	0.7
Real GDP (Bil 2005 yen)	526,457.2	525,868.6	528,636.1	531,925.9	537,930.2	543,469.8
% Change	1.4	-0.1	0.5	0.6	1.1	1.0
Population (Thou)	126,985.0	126,794.6	126,573.5	126,323.7	126,045.2	125,738.4
% Change	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
Exchange Rate (Yen/\$)	97.6	105.9	121.0	121.4	119.8	116.3

Note: Source is UHERO. Figures for 2016-2018 are forecasts.

TABLE 30: MAJOR ECONOMIC INDICATORS  
EXTENDED STATE OF HAWAII FORECAST

	2015	2016	2017	2018	2019	2020
Non-farm Payrolls (Thou)	636.9	647.6	653.9	658.4	662.0	664.6
% Change	1.5	1.7	1.0	0.7	0.5	0.4
Employment (Thou)	652.9	665.3	669.6	674.2	677.1	679.1
% Change	2.2	1.9	0.6	0.7	0.4	0.3
Unemployment Rate (%)	3.6	3.0	2.9	3.0	3.4	3.7
Population (Thou)	1,431.6	1,439.0	1,448.7	1,458.0	1,469.0	1,479.9
% Change	0.8	0.5	0.7	0.6	0.8	0.7
Personal Income (Mil\$)	68,373.4	70,775.1	73,760.3	77,187.8	80,129.4	82,575.2
% Change	4.6	3.5	4.2	4.6	3.8	3.1
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Real Personal Income (Mil 2015\$)	68,373.4	69,763.2	71,048.5	72,117.0	73,115.0	74,079.9
% Change	3.6	2.0	1.8	1.5	1.4	1.3
Real Per Capita Income (Thou 2015\$)	47.8	48.5	49.0	49.5	49.8	50.1
% Change	2.8	1.5	1.2	0.9	0.6	0.6
Real GDP (Mil 2015\$)	79,895.1	82,214.9	84,062.2	85,319.2	86,682.2	88,159.5
% Change	3.9	2.9	2.2	1.5	1.6	1.7
<b>TOURISM SECTOR DETAIL</b>						
Total Visitor Arrivals by Air (Thou)	8,534.0	8,671.8	8,766.6	8,836.8	8,890.5	8,938.8
% Change - Total Visitor Arrivals by Air	4.3	1.6	1.1	0.8	0.6	0.5
U.S. Visitors	5,307.0	5,414.8	5,477.6	5,508.2	5,536.6	5,555.6
% Change - U.S. Visitors	5.7	2.0	1.2	0.6	0.5	0.3
Japanese Visitors	1,499.2	1,479.9	1,496.0	1,513.3	1,519.9	1,528.7
% Change - Japanese Visitors	-0.8	-1.3	1.1	1.2	0.4	0.6
Other Visitors	1,727.8	1,777.1	1,793.0	1,815.3	1,833.9	1,854.6
% Change - Other Visitors	4.7	2.9	0.9	1.2	1.0	1.1
Avg. Length of Stay (Days)	9.1	9.1	9.2	9.2	9.2	9.2
Visitor Days (Thou)	77,727.8	79,339.4	80,519.2	81,420.0	82,100.7	82,511.8
% Change	3.7	2.1	1.5	1.1	0.8	0.5
Average Daily Room Rate (\$)	243.3	249.5	254.8	263.3	271.2	278.0
% Change	3.5	2.6	2.1	3.3	3.0	2.5
Occupancy Rate (%)	79.0	78.2	78.0	77.1	76.8	76.7
Real Visitor Expenditures (Mil 2015\$)	15,118.9	15,077.5	14,955.9	14,898.1	14,809.3	14,738.2
% Change	1.3	-0.3	-0.8	-0.4	-0.6	-0.5

Note: Source is UHERO. Historical figures for occupancy rate and daily room rate are from Hospitality Advisors LLC. Figures for GDP for 2015 is a UHERO estimates. Figures for 2016-2020 are forecasts.

TABLE 31: JOBS BY INDUSTRY  
EXTENDED STATE OF HAWAII FORECAST

	2015	2016	2017	2018	2019	2020
Non-farm Payrolls (Thou)	636.9	647.6	653.9	658.4	662.0	664.6
% Change	1.5	1.7	1.0	0.7	0.5	0.4
Construction and Mining	34.9	38.3	39.0	39.1	38.7	37.9
% Change	8.6	9.7	2.0	0.3	-1.0	-2.1
Manufacturing	14.0	13.9	13.8	13.9	14.0	14.0
% Change	0.9	-0.6	-0.6	0.6	0.5	0.4
Trade	88.3	88.9	89.6	90.2	90.6	90.9
% Change	0.8	0.7	0.8	0.6	0.4	0.3
Transportation and Utilities	30.8	31.3	31.8	32.1	32.4	32.7
% Change	2.3	1.5	1.7	1.0	0.8	0.8
Finance, Insurance and Real Estate	28.1	28.3	28.5	28.6	28.6	28.5
% Change	1.8	0.7	0.9	0.2	0.1	-0.2
Services	314.3	320.0	323.4	326.4	329.2	331.7
% Change	1.5	1.8	1.1	0.9	0.9	0.8
Health Care and Soc. Assistance	67.1	69.0	69.9	71.0	72.0	73.0
% Change	3.3	2.9	1.3	1.5	1.5	1.4
Accommodation and Food	102.5	104.2	105.3	106.4	107.0	107.4
% Change	1.3	1.7	1.1	1.0	0.6	0.3
Other	144.7	146.8	148.1	149.0	150.1	151.3
% Change	0.8	1.4	0.9	0.6	0.7	0.8
Government	126.6	127.0	127.7	128.1	128.5	129.0
% Change	0.3	0.3	0.5	0.4	0.3	0.3
Federal Government	33.2	33.3	33.3	33.2	33.2	33.2
% Change	0.0	0.2	0.1	-0.1	-0.1	0.0
State and Local Government	93.4	93.7	94.4	94.9	95.3	95.8
% Change	0.3	0.4	0.7	0.5	0.5	0.4

Note: Source is UHERO. Figures for 2016-2020 are forecasts.

TABLE 32: PERSONAL INCOME BY INDUSTRY  
EXTENDED STATE OF HAWAII FORECAST

	2015	2016	2017	2018	2019	2020
Real Personal Income (Mil 2015\$)	68,373.4	69,763.2	71,048.5	72,117.0	73,115.0	74,079.9
% Change	3.6	2.0	1.8	1.5	1.4	1.3
Labor & Proprietors' Income	48,920.0	50,109.5	50,987.1	51,626.5	52,146.2	52,579.8
% Change	3.6	2.4	1.8	1.3	1.0	0.8
Construction	3,885.0	4,273.9	4,441.2	4,486.7	4,457.1	4,366.5
% Change	12.8	10.0	3.9	1.0	-0.7	-2.0
Manufacturing	887.7	896.1	894.4	899.5	904.5	910.2
% Change	2.4	0.9	-0.2	0.6	0.6	0.6
Trade	4,188.2	4,239.6	4,280.5	4,326.3	4,375.6	4,422.3
% Change	1.5	1.2	1.0	1.1	1.1	1.1
Transportation and Utilities	2,482.7	2,530.9	2,588.5	2,630.2	2,666.4	2,699.8
% Change	5.0	1.9	2.3	1.6	1.4	1.3
Finance, Insurance & Real Estate	3,195.1	3,277.7	3,397.8	3,479.1	3,542.9	3,586.3
% Change	5.4	2.6	3.7	2.4	1.8	1.2
Services	18,861.4	19,412.6	19,814.9	20,161.5	20,447.4	20,690.5
% Change	3.4	2.9	2.1	1.7	1.4	1.2
Health Care & Soc. Assist. (% ch.)	4.6	4.3	2.6	2.4	2.1	1.8
Accommodation & Food (% ch.)	4.3	3.0	1.5	1.6	1.6	1.5
Other (% ch.)	2.5	2.2	2.1	1.5	1.0	0.8
Government	14,995.1	15,059.3	15,170.4	15,239.9	15,347.3	15,496.1
% Change	1.5	0.4	0.7	0.5	0.7	1.0
Federal, civilian (% ch.)	1.8	1.1	0.8	0.6	0.5	0.5
State & Local (% ch.)	2.6	0.8	1.6	1.0	0.7	0.6
Less Social Security Taxes (-)	5,578.7	5,650.0	5,749.0	5,821.1	5,879.7	5,928.6
% Change	1.8	1.3	1.8	1.3	1.0	0.8
Transfer Payments	10,936.4	11,128.5	11,415.2	11,706.2	12,015.2	12,338.9
% Change	3.5	1.8	2.6	2.5	2.6	2.7
Dividends, Interest and Rent	14,095.7	14,175.2	14,395.2	14,605.4	14,833.2	15,089.7
% Change	2.9	0.6	1.6	1.5	1.6	1.7
Population (Thou)	1,431.6	1,439.0	1,448.7	1,458.0	1,469.0	1,479.9
% Change	0.8	0.5	0.7	0.6	0.8	0.7
Real Per Capita Income (Thou 2015\$)	47.8	48.5	49.0	49.5	49.8	50.1
% Change	2.8	1.5	1.2	0.9	0.6	0.6
Inflation Rate, Honolulu MSA (%)	1.0	1.5	2.3	3.1	2.4	1.7
Nominal Personal Income (Mil. \$)	68,373.4	70,775.1	73,760.3	77,187.8	80,129.4	82,575.2
% Change	4.6	3.5	4.2	4.6	3.8	3.1

Note: Source is UHERO. Figures for 2016-2020 are forecasts.

TABLE 33: CONSTRUCTION INDICATORS  
STATE OF HAWAII FORECAST

	2015	2016	2017	2018	2019	2020
<b>BUILDING PERMITS (Mil 2015\$)</b>						
Total Commitments to Build	5,518	5,781	5,889	5,875	5,507	5,143
% Change	19.0	4.8	1.9	-0.2	-6.3	-6.6
Real Private Building Permits	3,964	4,316	4,516	4,407	4,097	3,684
% Change	13.7	8.9	4.6	-2.4	-7.0	-10.1
Real Residential Building Permits	1,651	1,749	1,838	1,859	1,760	1,552
% Change	59.3	5.9	5.1	1.1	-5.3	-11.8
Real Non-Residential Building Permits	2,312	2,567	2,677	2,548	2,336	2,132
% Change	-5.6	11.0	4.3	-4.8	-8.3	-8.7
Government Contracts Awarded	1,555	1,466	1,373	1,468	1,410	1,458
% Change	34.8	-5.7	-6.3	7.0	-4.0	3.4
<b>CONSTRUCTION ACTIVITY</b>						
Real GE Contracting Tax Base (Mil 2015\$)	8,105	9,058	9,556	9,723	9,658	9,529
% Change	9.7	11.8	5.5	1.8	-0.7	-1.3
Nominal GE Contracting Tax Base (Mil \$)	8,105	9,704	10,915	11,720	12,034	11,950
% Change	15.4	19.7	12.5	7.4	2.7	-0.7
Construction Job Count (Thou)	34.9	38.3	39.0	39.1	38.7	37.9
% Change	8.6	9.7	2.0	0.3	-1.0	-2.1
Real Construction Income (Mil 2015\$)	3,885	4,274	4,441	4,487	4,457	4,366
% Change	12.8	10.0	3.9	1.0	-0.7	-2.0
<b>PRICES &amp; COSTS (HONOLULU)</b>						
Honolulu Median Home Price (Thou \$)	697.5	731.3	766.6	793.1	804.3	799.0
% Change	3.2	4.8	4.8	3.5	1.4	-0.7
Honolulu Median Condominium Price (Thou \$)	362.1	387.4	412.0	432.2	445.4	449.0
% Change	3.3	7.0	6.4	4.9	3.1	0.8
Honolulu Housing Affordability Index	83.0	79.6	74.8	72.3	71.6	71.9
% Change	5.9	-4.1	-6.0	-3.3	-1.0	0.5
Honolulu Construction Cost Index (2015=100)	100.0	107.1	114.2	120.5	124.6	125.4
% Change	5.1	7.1	6.6	5.5	3.4	0.7
30-Year Mortgage Rate (%)	3.9	4.2	4.7	5.1	5.3	5.5

Note: Source is UHERO. Figures for 2016-2020 are forecasts. Commitments to Build are the sum of private permits and public contracts awarded. Permits and tax base are deflated by Honolulu Construction Co. Income is deflated by Honolulu CPI. Housing affordability index is the ratio of median family income to qualifying income for a for the median-priced home (times 100).

TABLE 34: EXTERNAL INDICATORS  
EXTENDED STATE OF HAWAII FORECAST

	2015	2016	2017	2018	2019	2020
<b>U.S. FACTORS</b>						
Employment (Thou)	148,833.4	150,846.7	152,122.9	152,760.4	153,545.4	154,479.3
% Change	1.7	1.4	0.8	0.4	0.5	0.6
Unemployment Rate (%)	5.3	4.7	4.6	4.8	4.9	4.9
Inflation Rate (%)	0.1	1.3	1.6	1.8	1.9	2.0
Real GDP (Bil 2009\$)	16,345.0	16,682.8	17,028.9	17,356.8	17,707.7	18,082.6
% Change	2.4	2.1	2.1	1.9	2.0	2.1
Population (Thou)	321,368.9	323,995.5	326,625.8	329,256.5	331,884.0	334,503.5
% Change	0.7	0.8	0.8	0.8	0.8	0.8
<b>JAPAN FACTORS</b>						
Employment (Thou)	63,759.2	63,808.4	63,575.1	63,280.6	62,970.7	62,647.4
% Change	0.4	0.1	-0.4	-0.5	-0.5	-0.5
Unemployment Rate (%)	3.4	3.2	3.3	3.5	3.7	3.9
Inflation Rate (%)	0.8	0.1	0.4	0.7	1.1	1.4
Real GDP (Bil 2005 yen)	528,636.1	531,925.9	537,930.2	543,469.8	548,919.7	554,292.8
% Change	0.5	0.6	1.1	1.0	1.0	1.0
Population (Thou)	126,573.5	126,323.7	126,045.2	125,738.4	125,402.9	125,039.0
% Change	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3
Exchange Rate (Yen/\$)	121.0	121.4	119.8	116.3	111.9	107.3

Note: Source is UHERO. Figures for 2016-2020 are forecasts.

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